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ANNUAL REPORT

OF THE

Secretary of Internal Affairs

OF THE

COMMONWEALTH OF PENNSYLVANIA

PART III.

INDUSTRIAL STATISTICS.

VOL. VI.

1877-8.

HARRISBURG
LANE S. HART,
STATE PRINTER AND BINDER.
1879

REPORT

OF THE

BUREAU OF INDUSTRIAL STATISTICS.

DEPARTMENT OF INTERNAL AFFAIRS,
BUREAU OF INDUSTRIAL STATISTICS,
HARRISBURG, *March, 1879.*

Honorable WILLIAM McCANDLESS,
Secretary of Internal Affairs:

SIR: Herewith I have the honor to present the Sixth Annual Report of Industrial Statistics, and the fourth during your official term as Secretary of Internal Affairs.

While the volumes are by no means as complete as they would have been had I at my disposal and control the necessary machinery with which to make a complete and systematic research into the various branches of productive industry throughout the State, still I have the satisfaction of knowing that I have utilized every source of information obtainable through the medium of correspondence and solicitation, and I have received from numerous sources testimonials of commendation and encouragement, evincing a lively spirit of appreciation on the part of the general public—a sentiment, which, by the way, should be fostered and encouraged on the part of the State government by a more liberal appropriation of means for the successful and thorough working of the Bureau.

It certainly does not reflect a high degree of intelligence on the part of our legislators when they refuse or neglect to make reasonable and proper appropriations for the specific use of this Bureau. Large sums of money for other purposes are annually appropriated, the objects of which in no wise compare in point of importance to the one in question. In mineral and productive wealth the first State of the Union, the vast resources and boundless wealth of Pennsylvania are comparatively unknown, or, at best, poorly understood. The reason is apparent. No provision has been made by law for the proper collection of statistics. Whatever information is contained in the reports has been gleaned from the voluntary contributions of correspondents throughout the State. In this connection it may not be unprofitable to compare the system in vogue in Massachusetts for the collection of statistics with our own. In that State, as I am informed

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by Honorable Carroll D. Wright, the efficient chief of its "Bureau of Statistics of Labor," the chief of the bureau receives an annual salary of $2,500, and the assistant, $1,500. For the year 1878, $5,000 were appropriated for contingent expenses. Of this amount, $4,500 were expended. For 1879 the total estimated expenses of the Massachusetts bureau are put down at $8,500. This includes salaries of chief and assistant, leaving $4,500 to be expended for extra clerical services in the collection and compilation of statistical information. Temporary clerks are paid at the rate of $60 per month for females, and $75 per month for males. The number of clerks employed depends upon the extent and amount of work on hand, and the term of service of each expires with the completion of the special work. The largest number employed at any one time in 1878 was five. Three of these were traveling agents, and two, clerks employed in the office.

Experience has demonstrated that a reduction in the present clerical force of this bureau can be profitably made, and the amount thus saved would constitute a fund sufficient to defray the necessary expenses of at least one traveling clerk. The advantages accruing to the Bureau from this proposed re-organization would be manifested in its greater efficiency and in its ability to organize a perfect system for the collection and tabulating of statistical information relative to all the great industries of the State. In lieu of the chief, three clerks, and one messenger now employed, the chief, one assistant, and a messenger would constitute a force sufficient to transact the ordinary business of the Bureau. When necessary, temporary clerical help could be employed upon the plan pursued by Massachusetts. This would be an emergency of brief duration, however, and insignificant in point of expense.

Another improvement could be made in the compilation of the report, by the omission of the reports of the bituminous mine inspectors. These reports should be published in a separate volume. For the present year they cover over three hundred pages, making the volume bulky. As the subject matter of these reports do not comprise, except in the aggregate, actual statistical information, the omission would be entirely proper, and and at the same time detract nothing from the value and interest of the report in question.

Very respectfully,

W. HAYES GRIER,

Chief of Bureau.

STATE GOVERNMENT.

GOVERNOR AND HEADS OF DEPARTMENTS, WITH THEIR PLACES OF RESIDENCE IN HARRISBURG.

GOVERNOR.

Henry M. Hoyt, Luzerne county, Executive Mansion, Front street, above Pine.

LIEUTENANT GOVERNOR.

Charles W. Stone, Warren county, Lochiel Hotel.

SECRETARY OF THE COMMONWEALTH.

M. S. Quay, Beaver county, Lochiel Hotel.

Private Secretary to Governor.

Chester N. Farr, Berks county, Lochiel Hotel.

DEPUTY SECRETARY OF THE COMMONWEALTH.

J. R. McAfee, Westmoreland county, Lochiel Hotel.

Chief Clerk.

Thomas McCamant, Blair county, 301 Forster street.

ATTORNEY GENERAL.

George Lear, Bucks county, Lochiel Hotel.

DEPUTY ATTORNEY GENERAL.

Lyman D. Gilbert, Dauphin county, No. 203 North Front street.

AUDITOR GENERAL.

William P. Schell, Bedford county, 121 Pine street.

Chief Clerk.

Edward Herrick, Bradford county, Bolton's Hotel.

STATE TREASURER.

A. C. Noyes, Clinton county, Bolton's Hotel.

Cashier.

J. Blake Walters, Clearfield county, 211 Walnut street.

SECRETARY OF INTERNAL AFFAIRS.

William McCandless, Philadelphia, United States Hotel.

DEPUTY SECRETARY OF INTERNAL AFFAIRS.

J. Simpson Africa, Huntingdon county, Bolton's Hotel.

BUREAU OF STATISTICS.

W. Hayes Grier, Commissioner, Lancaster county, Brady House.

SUPERINTENDENT OF PUBLIC INSTRUCTION AND SUPERINTENDENT OF SOLDIERS' ORPHAN SCHOOLS.

J. P. Wickersham, Lancaster county, United States Hotel.

DEPUTY SUPERINTENDENTS OF COMMON SCHOOLS.

Henry Houck, Lebanon county, United States Hotel.
W. A. Lindsey, Cumberland county, United States Hotel.

Chief Clerk.

James L. Paul, Westmoreland county, 121 West South street.

ADJUTANT GENERAL.

James W. Latta, Philadelphia, Lochiel Hotel.

Chief Clerk.

George C. Kelly, Union county, No. 1013 North Second street.

DEPARTMENT OF INSURANCE.

J. Montgomery Forster, Commissioner, Dauphin county, 303 South Front street.

DEPUTY COMMISSIONER.

L. R. Boggs, Huntingdon county, Lochiel Hotel.

STATE LIBRARIAN.

C. L. Ehrenfeld, Washington county, 1104 Sixth street.

ASSISTANT STATE LIBRARIAN.

Joseph R. Orwig, Union county, 313 North Second Street.

SUPERINTENDENT OF PUBLIC PRINTING AND BINDING.

J. W. Jones, Dauphin county, No. 27 South Third Street.

SUPERINTENDENT OF PUBLIC BUILDINGS AND GROUNDS.

W. Ross Hartshorne, Clearfield county, United States Hotel.

STATE PRINTER.

Lane S. Hart, No. 20 North Fourth street.

PUBLISHER OF DAILY RECORD.

S. B. Collins, Philadelphia, Brady House.

MEMBERS OF THE SENATE OF PENNSYLVANIA.

Philadelphia.

First District, 1st, 2d, 26th, and 30th wards—George Handy Smith, R., 1514 South Fifth street.

Second District, 3d, 4th, 5th, 6th, and 11th wards—John Cochran, D., 209 South Sixth street.

Third District, 16th, 17th, 18th, and 20th wards—John Lamon, R., 1303 Marlboro street.

Fourth District, 21st, 22d, 24th, and 27th wards—Horatio Gates Jones, R., 133 South Fifth street.

Fifth District, 15th, 28th, and 29th wards—John E. Reyburn, R., 1822 Spring Garden street.

Sixth District, 7th, 8th, and 9th wards—William Elliott, R., 1308 Spruce street.

Seventh District, 10th, 12th, 13th, and 14th wards—John C. Grady, R., 243 South Sixth street.

Eighth District, 19th, 23d, 25th, and 31st wards—William I. Newell, R., 3824 Frankford avenue.

IX. Delaware.

Thomas V. Cooper, R., Media.

X. Bucks.

Joseph Thomas, R., Quakertown.

XI. Berks.

Daniel Ermentrout, D., Reading.

XII. Montgomery.

Lewis Royer, R., Collegeville.

XIII. Lancaster.

Amos H. Mylin, R., Lancaster.

XIV. Lancaster.

C. S. Kauffman, R., Columbia.

XV. Dauphin.

A. J. Herr, R., Harrisburg.

XVI. Lehigh.

Evan Holben, D., Allentown.

XVII. Lebanon.

George F. Meily, R., Jonestown.

XVIII. Northampton.

William Beidelman, D., Easton.

XIX. Chester.

James B. Everhart, R., West Chester.

XX. Luzerne and Lackawanna.

G. B. Seamans, R., Pleasant Valley, Luzerne county.

XXI. Luzerne.

E. C. Wadhams, R., Wilkes-Barre.

XXII. Monroe, Pike, and Carbon.

Allen Craig, D., Mauch Chunk, Carbon county.

XXIII. Bradford and Wyoming.

William T. Davies, R., Towanda, Bradford county.

XXIV. LYCOMING, MONTOUR, SULLIVAN, AND COLUMBIA.

George D. Jackson, D., Dushore, Sullivan county.

XXV. TIOGA, POTTER, AND McKEAN.

C. H. Seymour, R., Tioga, Tioga county.

XXVI. SUSQUEHANNA AND WAYNE.

W. M. Nelson, D. G., Equinunk, Wayne county.

XXVII. UNION, SNYDER, AND NORTHUMBERLAND.

S. P. Wolverton, D., Sunbury.

XXVIII. YORK.

J. H. Ross, D., York.

XXIX. SCHUYLKILL.

Luther R. Keefer, R., Cressona.

XXX. SCHUYLKILL.

John Parker, N. G., Mahanoy City.

XXXI. PERRY, MIFFLIN, AND JUNIATA.

David M. Crawford, D., Mifflintown, Juniata county.

XXXII. CUMBERLAND AND ADAMS.

Isaac Hereter, D., Gettysburg, Adams county.

XXXIII. FRANKLIN AND HUNTINGDON.

Horatio G. Fisher, R., Huntingdon, Huntingdon county.

XXXIV. CLINTON, CLEARFIELD, AND CENTRE.

C. T. Alexander, D., Bellefonte, Centre county.

XXXV. BLAIR AND CAMBRIA.

John A. Lemon, R., Hollidaysburg, Blair county.

XXXVI. SOMERSET, BEDFORD, AND FULTON.

Frederick Grof, D., Stoyestown, Somerset county.

XXXVII. INDIANA AND JEFFERSON.

Thomas St. Clair, R., Indiana, Indiana county.

XXXVIII. CAMERON, ELK, CLARION, AND FOREST.

John G. Hall, D., Ridgway, Elk county.

XXXIX. WESTMORELAND.

James C. Clark, D., Greensburg.

XL. FAYETTE AND GREENE.

Thomas B. Schnatterly, D., Uniontown, Fayette county.

XLI. BUTLER AND ARMSTRONG.

John M. Greer, R., Butler, Butler county.

XLII. ALLEGHENY.

Hugh McNeill, R., Allegheny city.

XLIII. ALLEGHENY.

Joseph M. Gazzam, R., Pittsburgh.

XLIV. ALLEGHENY.

C. H. Paulson, D., Wood street, Pittsburgh.

XLV. ALLEGHENY.

John Gilfillan, R., Upper St. Clair.

XLVI. BEAVER AND WASHINGTON.

George V. Lawrence, R., Monongahela City, Washington county.

XLVII. LAWRENCE AND MERCER.

George W. Wright, R., Mercer, Mercer county.

XLVIII. WARREN AND VENANGO.

J. W. Lee, R., Franklin, Venango county.

XLIX. ERIE.

Henry Butterfield, R., Erie.

L. CRAWFORD.

W. B. Roberts, R., Titusville.

Republicans,	32
Democrats,	16
National Greenback,	1
Greenback Democrat,	1

Officers of the Senate.

PRESIDENT PRO TEM.—Honorable A. J. Herr, Harrisburg, Dauphin county.
CHIEF CLERK—Thomas B. Cochran, Lancaster, Lancaster county.
JOURNAL CLERK—Lucius Rogers, Smethport, McKean county.
READING CLERK—E. W. Smiley, Franklin, Venango county.
SPEAKER'S CLERK—J J. Clyde, Harrisburg, Dauphin county.
MESSAGE CLERK—W. A. Hinchman, London, Franklin county.
TRANSCRIBING CLERKS—F. A. Weaver, Brookville, Jefferson county.
M. P. Hannum, Delaware, Delaware county.
LIBRARIAN—J. C. Delaney, Pittston, Luzerne county.
SERGEANT-AT-ARMS—Robert T. Graves, Philadelphia.
POSTMASTER—Charles Algeo, Philadelphia.
MESSENGER—E. A. Coryell, Philadelphia.
DOOR KEEPER—Samuel Baker, Hollidaysburg, Blair county.

MEMBERS OF THE HOUSE OF REPRESENTATIVES.

PHILADELPHIA.

First district, 1st ward—James S. Mitchell, R., 242 Reed street.
Samuel Strien, R., 316 Emmett street.
Second district, 2d ward—T. J. Reynolds, R., 1120 South Eighth street.
John C. Thompson, R., 322 Christian street.
Third district, 3d ward—Richard McCloskey, D., 755 South Seventh street.
Fourth district, 4th ward—John Donahue, D., 734 South Eighth street.
Fifth district, 5th ward—Emile J. Petroff, R., 520 South Fourth street.
Sixth district, 6th ward—H. F. Wilson, R., 308 Race street.
Seventh district, 7th ward—William H. Patterson, R., 1901 South street.
Samuel Huhn, R., 422 South Fifteenth street.
Eighth district, 8th ward—Edward Law, R., 1212 Walnut street.
Ninth district, 9th ward—William H. Patterson, R., 46 North Twenty-first street.
Tenth district, 10th ward—George W. Hall, R., 1131 Arch street.
Eleventh district, 11th ward—Albert Crawford, D., 137 Noble street.
Twelfth district, 12th ward—C. R. Gentner, D., 314 Brown street.
Thirteenth district, 13th ward—D. C. Clarke, R., 506 Franklin street.
Fourteenth district, 14th ward—John H. Fulmer, R., 1021 Parrish street.
Fifteenth district, 15th ward—Elisha W. Davis, R., 514 North Nineteenth street.
James Neill, R., 1825 Wallace street.
I. D. McKee, R., 2205 and 2207 Hamilton street.
Sixteenth district, 16th ward—A. J. Elder, D., 1105 North Second street.
Seventeenth district, the 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, and 14th divisions of the 17th ward—John E. Faunce, D., 1225 North Fifth street.
Eighteenth district, the 1st, 2d, 3d, and 4th divisions of the 17th and 18th wards—
Josiah N. Koehersperger, R., 440 East Girard avenue.
William Graham, R., 1142 East Cumberland street.
Nineteenth district, 19th and 31st wards—Robert Gillespie, R., 2448 Kensington avenue.
Alfred Redfern, R., 1925 Coral street.
W. J. Maneely, R., 2113 Cedar street.

Twentieth district, 20th ward—S. J. Yarger, R., 1949 Alder street.
William H. Hazlet, R., 1425 Park avenue.
Twenty-first district, 21st and 28th wards—James Holgate, R., 1109 Lehigh avenue.
Twenty-second district, 22d ward—Joseph M. Hill, R., 5002 Adams street.
Twenty-third district, 23d ward—John T. Farr, R., 4234 Frankford Road.
Twenty-fourth district, 24th ward—George T. Jones, D., Torr avenue, N. North Fifty-second street.
Twenty-fifth district, 25th ward—George F. Smith, D., 80 Buckius street, Frankford.
Twenty-sixth district, 26th ward—Joseph R. Souder, R., 1314 South Tenth street.
William J. Pollock, R., 734 South Seventeenth street.
Twenty-seventh district, 27th ward—John W. Leigh, R., 3801 Spruce street.
Twenty-eighth district, 29th ward—Alfred C. Neall, R., 2332 Oxford street.

Adams.

W. R. White, D., Emmittsburg, Frederick county, Maryland.
J. E. Smith, D., Centennial.

Allegheny.

First district—Henry M. Long, R., Allegheny City.
James D. Walker, R., Allegheny City.
N. H. Voegtly, R., Allegheny City.
Second district—Robert S. Frazer, R., 61 Grant street, Pittsburgh.
William Flinn, R., Sixth ward, Pittsburgh.
Third district—John O'Neil, D., corner Grant street and Sixth avenue, Pittsburgh.
Fourth district—Matthew Edwards, R., Lincoln avenue, Twenty-first ward, Pittsburgh.
S. R. Baldwin, R., Howley avenue, Sixteenth ward, Pittsburgh.
Frederick K. Gearing, R., 1919 Sidney street, Pittsburgh, South Side.
James M. Taylor, D., 436 Penn avenue, Pittsburgh.
Fifth district—William H. Magill, R., Rural Ridge.
A. B. Campbell, R., McKeesport.
Sixth district—William Hill, R., Mansfield Valley.
Alexander Walker, R., West Elizabeth.

Armstrong.

W. F. Rumberger, R., Craigsville.
E. D. Graff, D., Worthington.

Beaver.

John Caughey, R., Beaver.
Thomas Bradford, D., New Brighton.

Bedford.

D. R. Anderson, D., Cumberland Valley.
Joseph E. Noble, D., Water Side.

Berks.

First district—Jeremiah H. Boone, R., Reading.
G. S. McFarlan, D., Reading.
Second district—George D. Schaeffer, D., Fleetwood.
Stephen J. Smith, D., Hamburg.
James Liggett, D., Birdsboro'.
John H. Riegel, D., Centreport.

Blair.

Benjamin L. Hewit, R., Hollidaysburg.
David A. Gilland, D., Altoona.

Bradford.

H. J. Madill, R., Towanda.
Asa Nichols, R., LeRaysville.
S. D. Harkness, R., Springfield.

Bucks.

Henry C. Moore, D., Sellersville.
W. B. Worthington, R., Bridge Valley.
John H. Burton, R., Emilie.
Symington Phillips, D., Bristol.

Butler.

George H. Graham, D., Baldwin.
James Humphreys, D., Jacksville.

Cambria.

L. D. Woodruff, D., Johnstown.
John Fenlon, D., Ebensburg.

Cameron.

John Brooks, R., Sinnemahoning.

Carbon.

J. G. Zern, D., Weissport.
Michael Cassidy, D., Nesquehoning.

Centre.

J. P. Gephart, D., Bellefonte.
W. A. Murray, D., Boalsburg.

Chester.

Samuel Butler, R., Lionville.
William T. Fulton, R., Oxford.
Jesse Matlack, R., Milltown.
John A. Reynolds, R., Atglen.

Clarion.

John W. Kahl, D., Clarion.
Jacob Truby, D., Catfish.

Clearfield.

Ash D. Bennet, D., New Washington.

Clinton.

George J. Eldred, D., Mackeyville.

Columbia.

T. J. Vanderslice, D., Bloomsburg.
J. B. Knittle, D , Catawissa.

Crawford.

David Emery, R., Titusville.
H. D. Lowing, R., Center Road Station.
Paul Blackmer, R., Spartansburg.
L. W. Thickstun, N. G., Mosiertown.

Cumberland.

A. M. Rhoads, D., Carlisle.
Robert McCachran, junior, D., Newville.

Dauphin.

First district—Charles L. Bailey, R., Harrisburg.
Second district—Joseph H. Landis, R., Middletown.
Benjamin Bordner, R. Berrysburg.

Delaware.

Y. S. Walter, R., Chester.
Nathan Garrett, R., Garrettford.

Elk.

Charles R. Earley, D., Ridgway.

Erie.

First district—Gustav Jarecki, R., Erie.
Second district—S. E. Kincaid, R., Wayne.
M. H. Silverthorn, R., Fairview.
Alfred Short, D., North East.

Fayette.

Jacob Provins, D., Masontown.
Charles, S. Seaton, N. G., Uniontown.

Forest.

N. P. Wheeler, R., East Hickory.

Franklin.

William Burgess, R., Richmond Furnace.
John Sweney, D., Chambersburg.
H. C. Greenawalt, R., Fayetteville.

Fulton.

Andrew C. Davis, Hustontown.

Greene.

Matthias Brant, D., Waynesburg.

Huntingdon.

M. P. Doyle, N. G., Huntingdon.
B. R. Foust, N. G., Mill Creek.

Indiana.

A. H. Fulton, R., West Lebanon.
John Hill, R., Blairsville.

Jefferson.

R. J. Nicholson, D., Brookville.

JUNIATA.

Lucien Banks, D., Mifflintown.

LANCASTER.

First district—H. C. Demuth, R., Lancaster.
Second district—John H. Landis, R., Millersville.
J. C. Gatchell, R., Marticville.
Third district—Doctor C. J. Snavely, R., Manheim.
F. U. Gantz, R., Marietta.
P. M. Eberly, R., Reamstown.

LAWRENCE.

W. H. McCandless, R., New Castle.
Walter Fullerton, R., Mount Jackson.

LEBANON.

George W. Hoverter, R., Annville.
John Etter, R. Myerstown.

LEHIGH.

Ernest Nakel, D., Catasauqua.
F. B. Heller, D., Coopersburg.
C. H. Foster, D., Jacksonville.

LYCOMING.

John Gaus, N. G., Jersey Shore.
Peter Reeder, N. G., Hughesville.
Frank Porter, D., Montgomery Station.

LUZERNE AND LACKAWANNA.

First district—Charles A. Miner, R., Wilkes-Barre.
Second district—John B. Smith, R., Kingston.
Third district—W. H. Hines, N. G., Ashley.
Fourth district—George W. Drum, D., Hazleton.
Fifth district—Dennis O'Lenihan, N. G., Lackawanna, Lackawanna county.
Sixth district—John E. Barrett, R., Scranton.
T. D. Lewis, R., Providence.
Seventh district—A. I. Ackerly, R. Clark's Green.
Eighth district—Thomas Mooney, N. G., Carbondale.

McKEAN.

Lewis Emery, junior, R., Bradford.

MERCER.

B. F. Gordon, R., Leesburgh.
Harry Watson, R., Greenville.
J. W. McConnell, R., Milledgeville.

MIFFLIN.

Joseph H. Maclay, R., Belleville.

MONROE.

Joseph Fabel, D., Snydersville.

MONTGOMERY.

Edwin Hallowell, D., Willow Grove.
J. C. Dannehower, D., Tylersport.
M. S. Sellers, D., Hatfield.
W. B. Roberts, R., King of Prussia.
Isaac Hoyer, R., Potttstown.

MONTOUR.

P. C. Newbaker, D., Washingtonville.

NORTHAMPTON.

J. M. Hacket, D., Easton.
Henry Scholl, D., Bath.
A. W. Lerch, D., Cherryville.

NORTHUMBERLAND.

Daniel L. Sherwood, D., Northumberland.
J. W. Scanlan, D., Sunbury.

PERRY.

M. B. Holman, R., Liverpool.

PIKE.

C. A. Smith, D., Milford.

Potter.

William Shear, N. G., Coudersport.

Schuylkill.

First district—Patrick Conroy, N. G., Shenandoah.
Second district—John F. Welsh, N. G., Minersville.
Third district—J. T. Shoener, N. G., Orwigsburg.
Fourth district—S. C. Kirk, D., Tremont.
C. B. Palsgrove, D., Schuylkill Haven.
Clay W. Evans, R., St. Clair.

Snyder.

Charles Miller, R., Salem.

Somerset.

E. M. Schrock, R., Somerset.
A. J. Colborn, R., Somerset.

Sullivan.

E. M. Dunham, R., Laporte.

Susquehanna.

John C. Morris, N. G., Friendsville.
J. W. Cargill, N. G., Jackson.

Tioga.

C. V. Elliott, R., Mansfield.
Benjamin Dorrance, R., Elkland.

Union.

Charles S. Wolfe, R., Lewisburg.

Venango.

George E. Mapes, R., Pleasantville.
S. B. Myers, R., Franklin.
J. L. Dewoodey, N. G., Franklin.

Warren.

J. B. White, N. G., Youngsville.

Washington.

John W. Stephens, R., Bentleyville.
Findley Patterson, D., Cardville.
John C. Messenger, D., Dunningsville.

Wayne.

N. F. Underwood, R., Lake Como.
A. B. Gammell, D., Bethany.

Westmoreland.

Noah M. Marker, D., Ligonier.
James S. Warden, D., Mount Pleasant.
E. C. Leighty, D., West Newton.

Wyoming.

A. W. Stephens, D., Nicholson.

York.

George E. Sherwood, D., York.
P. S. Bowman, D., Hanover.
J. Weist, D., York.
William Campbell, D., Airville.

Republicans,	107
Democrats,	77
National Greenback,	17

Officers of the House of Representatives.

Speaker—Henry M. Long, Allegheny City, Allegheny county.
Chief Clerk—William C. Shurlock, Beaver Falls, Beaver county.
Resident Clerk—John A. Smull, Harrisburg, Dauphin county.
Reading Clerk—Henry Huhn, 802 North Sixteenth street, Philadelphia.
Journal Clerk—J. E. Allen, Harrisburg, Dauphin county.
Message Clerk—H. S. Bates, Titusville, Crawford county.
Transcribing Clerks—J. E. Paul, Swissvale, Allegheny county.
F. A. Taggart, West Chester, Chester county.
Sergeant-at-Arms—J. B. Potter, Wellsboro', Tioga county.
Postmaster—P. W. Raymond, Franklin, Venango county.
Door Keeper—Joseph H. Carr, Jamestown, Mercer county.
Messenger—M. Nell, Diamond, above Fifth street, Philadelphia.

ORGANIZATION OF COUNTIES.

Names and date, day, month, and year of the erection of the several counties of the Commonwealth of Pennsylvania, and the territory from which they were formed. The three first counties which were formed, to wit, Philadelphia, Bucks, and Chester, were established at the first settlement of the Province of Pennsylvania, and formed the only original counties of all that territory of which the now great State is formed, comprised of sixty-seven counties, as follows, viz:

1. Adams, January 23, 1800, formed of a part of York.
2. Allegheny, September 24, 1788, formed of a part of Westmoreland and Washington.
3. Armstrong, March 12, 1800, formed of a part of Allegheny, Westmoreland, and Lycoming.
4. Beaver, March 12, 1800, formed of a part of Allegheny and Washington.
5. Bedford, March 9, 1771, formed of a part of Cumberland.
6. Berks, March 11, 1752, formed of a part of Philadelphia, Chester, and Lancaster.
7. Blair, February 26, 1846, formed of a part of Huntingdon and Bedford.
8. Bradford, February 21, 1810, formed of a part of Luzerne and Lycoming.*
9. Bucks, one of the original counties of the Province, 1682.†
10. Butler, March 12, 1800, formed of a part of Allegheny.
11. Cambria, March 25, 1804, formed of a part of Huntingdon, Somerset, and Bedford.
12. Cameron, March 29, 1860, formed of a part of Clinton, Elk, McKean, and Potter.
13. Carbon, March 13, 1843, formed of a part of Northampton and Monroe.
14. Centre, February 13, 1800, formed of a part of Mifflin, Northumberland, Lycoming, and Huntingdon.
15. Chester, one of the original counties, established at the first settlement of the Province, 1682.
16. Clarion, March 11, 1839, formed of a part of Venango and Armstrong.
17. Clearfield, March 26, 1804, formed of a part of Lycoming and Northumberland.
18. Clinton, June 21, 1839, formed of a part of Lycoming and Centre.
19. Columbia, March 22, 1813, formed of a part of Northumberland.
20. Crawford, March 12, 1800, formed of a part of Allegheny.
21. Cumberland, January 27, 1750, formed of a part of Lancaster.
22. Dauphin, March 4, 1785, formed of a part of Lancaster.
23. Delaware, September 26, 1789, formed of a part of Chester.
24. Elk, April 18, 1843, formed of a part of Jefferson, Clearfield, and McKean.
25. Erie, March 12, 1800, formed of a part of Allegheny.
26. Fayette, September 26, 1783, formed of a part of Westmoreland.
27. Forest, April 11, 1848, formed of a part of Jefferson and Venango.‡
28. Franklin, September 9, 1784, formed of a part of Cumberland.
29. Fulton, April 19, 1850, formed of a part of Bedford.
30. Greene, February 9, 1796, formed of a part of Washington.
31. Huntingdon, September 20, 1787, formed of a part of Bedford.
32. Indiana, March 30, 1803, formed of a part of Westmoreland and Lycoming.
33. Jefferson, March 26, 1804, formed of a part of Lycoming.
34. Juniata, March 2, 1831, formed of a part of Mifflin.

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* Previous to March 24, 1812, this county was called Ontario, but its name was changed to Bradford on that day.

† Bucks county was one of the original counties, established at the first settlement of the Province of Pennsylvania; the other two being Philadelphia and Chester.—*See Votes of the Assembly, Vol. 1.*

‡ Part of Venango added by act approved October 31, 1866.

35. Lancaster, May 10, 1729, formed of a part of Chester.
36. Lawrence, March 28, 1849, formed of a part of Beaver and Mercer.
37. Lebanon, February 16, 1813, formed of a part of Dauphin and Lancaster.
38. Lehigh, March 6, 1812, formed of a part of Northampton.
39. Luzerne, September 25, 1786, formed of a part of Northumberland.
40. Lackawanna, 1879, formed of part of Luzerne.
41. Lycoming, April 13, 1795, formed of a part of Northumberland.
42. McKean, March 26, 1804, formed of a part of Lycoming.
43. Mercer, March 12, 1800, formed of a part of Allegheny.
44. Mifflin, September 19, 1789, formed of a part of Cumberland and Northumberland.
45. Monroe, April 1, 1836, formed of a part of Northampton and Pike.
46. Montgomery, September 10, 1784, formed of a part of Philadelphia.
47. Montour, May 3, 1850, formed of a part of Columbia.
48. Northampton, March 11, 1752, formed of a part of Bucks.
49. Northumberland, March 21, 1772, formed of parts of Lancaster, Cumberland, Berks, Bedford, and Northampton.
50. Perry, March 22, 1820, formed of a part of Cumberland.
51. Philadelphia, one of the original counties, established at the first settlement of the Province, 1682.
52. Pike, March 26, 1814, formed of a part of Wayne.
53. Potter, March 26, 1804, formed of a part of Lycoming.
54. Schuylkill, March 1, 1811, formed of a part of Berks and Northampton.
55. Snyder, March 2, 1855, formed of a part of Union.
56. Somerset, April 17, 1795, formed of a part of Bedford.
57. Sullivan, March 15, 1847, formed of a part of Lycoming.
58. Susquehanna, February 21, 1810, formed of a part of Luzerne.
59. Tioga, March 26, 1804, formed of a part of Lycoming.
60. Union, March 22, 1813, formed of a part of Northumberland.
61. Venango, March 12, 1800, formed of a part of Allegheny and Lycoming.
62. Warren, March 12, 1800, formed of a part of Allegheny and Lycoming.
63. Wayne, March 21, 1798, formed of a part of Northampton.
64. Washington, March 28, 1781, formed of a part of Westmoreland.
65. Westmoreland, February 26, 1773, formed of a part of Bedford, and in 1785 part of the purchase of 1781 was added thereto.
66. Wyoming, April 4, 1842, formed of a part of Luzerne.
67. York, August 17, 1749, formed of a part of Lancaster.

COUNTIES AND COUNTY TOWNS OF PENNSYLVANIA.

Distances of County Towns from Washington and Harrisburg.

Name of County.	County Towns.	Distance from Washington—miles.	Distance from Harrisburg—miles.
Adams,	Gettysburg,	117	69
Allegheny,	Pittsburgh,	375	249
Armstrong,	Kittanning,	373	249
Beaver,	Beaver,	403	277
Bedford,	Bedford,	203	108
Berks,	Reading,	157	54
Blair,	Hollidaysburg,	264	140
Bradford,	Towanda,	293	167
Bucks,	Doylestown,	176	142
Butler,	Butler,	378	252
Cambria,	Ebensburg,	285	159
Cameron,	Emporium,	319	193
Carbon,	Mauch Chunk,	222	119
Centre,	Bellefonte,	216	149
Chester,	West Chester,	171	80
Clarion,	Clarion,	406	280
Clearfield,	Clearfield,	285	159
Clinton,	Lock Haven,	246	123
Columbia,	Bloomsburg,	207	81
Crawford,	Meadville,	473	347
Cumberland,	Carlisle,	144	18
Dauphin,	Harrisburg,	126	
Delaware,	Media,	156	123
Elk,	Ridgway,	351	225
Erie,	Erie,	469	343
Fayette,	Uniontown,	262	322
Forest,	Tionesta,	353	227
Franklin,	Chambersburg,	147	52
Fulton,	McConnellsburg,	169	74
Greene,	Waynesburg,	323	300
Huntingdon,	Huntingdon,	224	98
Indiana,	Indiana,	341	215
Jefferson,	Brookville,	327	201
Juniata,	Mifflintown,	175	49
Lancaster,	Lancaster,	123	38
Lawrence,	New Castle,	425	299
Lebanon,	Lebanon,	152	26
Lehigh,	Allentown,	193	90
Luzerne,	Wilkes-Barre,	247	121
Lycoming,	Williamsport,	221	95
McKean,	Smethport,	388	262
Mercer,	Mercer,	443	317
Mifflin,	Lewistown,	187	61
Monroe,	Stroudsburg,	254	139
Montgomery,	Norristown,	160	96
Montour,	Danville,	195	69
Northampton,	Easton,	210	107
Northumberland,	Sunbury,	181	55
Perry,	New Bloomfield,	160	54
Philadelphia,	Philadelphia,	142	108
Pike,	Milford,	326	276
Potter,	Coudersport,	345	219
Schuylkill,	Pottsville,	192	89
Snyder,	Middleburg,	185	59
Somerset,	Somerset,	238	200
Sullivan,	Laporte,	237	111
Susquehanna,	Montrose,	305	179
Tioga,	Wellsboro',	303	177
Union,	Lewisburg,	190	64
Venango,	Franklin,	435	309
Warren,	Warren,	403	277
Washington,	Washington,	298	275
Wayne,	Honesdale,	296	170
Westmoreland,	Greensburg,	344	218
Wyoming,	Tunkhannock,	289	163
York,	York,	98	28

TABLE *Exhibiting the Seats of Government, the time of the Election of State Officers, and the meeting of the Legislatures of the several States.*

STATES.	Seat of Government.	Time of holding Election.	Meeting of the Legislatures.
Alabama,	Montgomery,	Tuesday after first Monday in November,	Third Monday in November.
Arkansas,	Little Rock,	First Monday in November,	First Monday in January.
California,	Sacramento,	Tuesday after first Monday in September,	First Monday in December, *biennially.*
Connecticut,	Hartford,	First Monday in April,	First Wednesday in May.
Delaware,	Dover,	First Tuesday in August,	First Tuesday in January, *biennially.*
Florida,	Tallahassee,	Tuesday after first Monday in November,	Tuesday after first Monday in January.
Georgia,	Atlanta,	First Tuesday in August,	Second Wednesday in January, *biennially.*
Illinois,	Springfield,	Tuesday after first Monday in November,	First Monday in January, *biennially.*
Indiana,	Indianapolis,	Second Tuesday in October,	First Wednesday in January, *biennially.*
Iowa,	Des Moines,	Second Tuesday in October,	Second Monday in January, *biennially.*
Kansas,	Topeka,	First Tuesday in November,	Second Tuesday in January.
Kentucky,	Frankfort,	First Monday in August,	First Monday in December, *biennially.*
Louisiana,	New Orleans,	First Monday in November,	First Monday in January.
Maine,	Augusta,	Second Monday in September,	First Wednesday in January.
Maryland,	Annapolis,	First Tuesday in November,	First Wednesday in January, *biennially.*
Massachusetts,	Boston,	Tuesday after first Monday in November,	First Wednesday in January.
Michigan,	Lansing,	Tuesday after first Monday in November,	First Wednesday in January, *biennially.*
Minnesota,	St. Paul,	First Tuesday in November,	Tuesday after first Monday in January.
Mississippi,	Jackson,	Tuesday after first Monday in November,	Tuesday after first Monday in January.
Missouri,	Jefferson City,	First Tuesday in November,	Last Monday in December, *biennially.*
Nebraska,	Lincoln,	Second Tuesday in October,	Thursday after first Monday in January, *biennially.*
Nevada,	Carson City,	Tuesday after first Monday in November,	First Monday in January, *biennially.*
New Hampshire,	Concord,	Second Tuesday in March,	First Monday in June.
New Jersey,	Trenton,	Tuesday after first Monday in November,	Second Tuesday in January.
New York,	Albany,	Tuesday after first Monday in November,	First Tuesday in January.
North Carolina,	Raleigh,	First Thursday in August,	First Thursday in November.
Ohio,	Columbus,	Second Tuesday in October,	First Monday in January, *biennially.*
Oregon,	Salem,	First Monday in June,	Second Monday in September, *biennially.*
Pennsylvania,	Harrisburg,	Tuesday after first Monday in November,	First Tuesday in January.
Rhode Island,	Newport, Providence,	First Wednesday in April,	May and January.
South Carolina,	Columbia,	First Monday in November,	Third Wednesday in October.
Tennessee,	Nashville,	First Monday in August,	First Monday in October, *biennially.*
Texas,	Austin,	First Tuesday in December,	First Monday in November.
Vermont,	Montpelier,	First Tuesday in September,	Second Thursday in October, *biennially.*
Virginia,	Richmond,	Tuesday after first Monday in November,	First Monday in December.
West Virginia,	Wheeling,	Fourth Thursday in October,	Second Tuesday in January.
Wisconsin,	Madison,	Tuesday after first Monday in November,	First Wednesday in January.

HISTORICAL AND STATISTICAL TABLE OF THE UNITED STATES.

STATES.	When settled.	Where settled.	By whom settled.	When adopted the Constitution.	When admitted into the Union.	Square miles.	Population in 1870.
Virginia,	1607	Jamestown,	English,	June 26, 1788,		41,352	1,225,163
New York,	1614	Albany,	Dutch,	July 26, 1788,		47,156	4,382,759
Massachusetts,	1620	Plymouth,	English,	Feb. 6, 1788,		7,800	1,457,351
New Hampshire,	1624	Dover,	English,	June 21, 1788,		9,280	318,300
New Jersey,	1624	Bergen,	Dutch and Danes,	Dec. 18, 1787,		8,320	906,096
Delaware,	1627	Cape Henlopen,	Swedes and Finns,	Dec. 7, 1787,		2,120	125,015
Connecticut,	1633	Windsor,	Emigrants from Massachusetts,	Jan. 9, 1788,		4,674	537,454
Maryland,	1634	St. Mary's,	English,	April 28, 1788,		9,356	780,894
Rhode Island,	1636	Providence,	Roger Williams,	May 29, 1790,		1,306	217,353
North Carolina,	1663	Albermarle,	English,	Nov. 21, 1789,		45,000	1,071,361
South Carolina,	1670	Port Royal,	English,	May 23, 1788,		24,500	705,606
Pennsylvania,	1682	Philadelphia,	English,	Dec. 12, 1787,		46,000	3,521,791
Georgia,	1733	Savannah,	English,	Jan. 9, 1788,		58,000	1,184,109
Florida,	1565	St. Augustine,	Spanish,		March 3, 1845,	59,268	187,748
Maine,	1623	Bristol,	English,		March 16, 1820,	35,000	626,915
Wisconsin,	1669	Green Bay,	French,		May 29, 1848,	53,924	1,054,670
Michigan,	1670	Detroit,	French,		Jan. 26, 1837,	56,243	1,184,059
Arkansas,	1685	Arkansas Post,	French,		June 15, 1836,	52,198	484,471
Texas,	1690	St. Antonio de Bexar,	Spanish,		Dec. 24, 1845,	237,321	818,579
Indiana,	1690	Vincennes,	French,		Dec. 11, 1816,	33,809	1,680,637
Louisiana,	1699	Iberville,	French,		April 8, 1812,	46,431	726,915
Alabama,	1711	Mobile,	French,		Dec. 14, 1819,	50,722	996,992
Mississippi,	1716	Natchez,	French,		Dec. 10, 1817,	47,156	827,922
Illinois,	1720	Kaskaskia,	French,		Dec. 3, 1818,	55,405	2,539,891
Vermont,	1725	Fort Drummer,	Emigrants from Massachusetts,		March 4, 1791,	9,056	330,551
Tennessee,	1757	Fort Louden,	Emigrants from North Carolina,		June 1, 1796,	45,600	1,258,520
Missouri,	1764	St. Louis,	French,		August 10, 1821,	67,380	1,721,295
California,	1769	San Diego,	Spanish,		Sept. 7, 1850,	158,933	560,247
Kentucky,	1775	Boonesborough,	Daniel Boone and associates,		June 1, 1792,	37,680	1,321,011
Ohio,	1788	Marietta,	Emigrants from New England,		Nov. 29, 1802,	39,964	2,665,260
Oregon,	1811	Astoria,	Emigrants from Eastern States,		1859,	95,248	90,923
Iowa,	1833	Burlington,	Emigrants from Eastern States,		March 3, 1845,	55,045	1,191,792
Minnesota,	1846	Saint Paul,	Emigrants from Eastern States,		May, 1858,	83,531	439,706
Kansas,	1850	Topeka,	Emigrants from Eastern States,		1861,	81,318	364,399
West Virginia,					1862,	20,000	442,014
Nevada,			Emigrants from Eastern States,		1864,	112,090	42,491
Nebraska,			Emigrants from Eastern States,		1867,	75,995	122,993

AMERICAN WARS DURING THE PAST ONE HUNDRED YEARS.

		Length.	Cost.
1.	War of the Revolution, ...	7 years, 1775–82,	$135,193,703
2.	Indian war in Ohio Territory, ...	1790.	
3.	War with Barbary, ...	1803–04.	
4.	Tecumseh Indian war, ...	1811.	
5.	War with Great Britain, ...	3 years, 1812–15.	107,159,003
6.	Algerine war, ...	1815.	
7.	First Seminole war, ...	1817.	
8.	Black Hawk war, ...	1832.	
9.	Second Seminole war, ...	1845.	
10.	Mexican war, ...	2 years, 1846–48,	66,000,000
11.	Mormon war, ...	1856.	
12.	War of Rebellion, ...	4 years, 1861–65,	3,000,000,000

FINANCIAL.

TREASURY DEPARTMENT,
OFFICE OF COMPTROLLER OF THE CURRENCY,
WASHINGTON, *January 9, 1879.*

SIR: Your letter of the 7th inst. has been received, and in compliance with the request made therein, I herewith inclose you:

1. Abstracts of the reports made to the Comptroller of the Currency, showing the condition of the national banks in Pennsylvania, in Philadelphia, and in Pittsburgh, separately, at the close of business on the 22d day of June and the 1st day of October, 1878. Abstracts of the reports have not yet been prepared for any date later than October 1.

2. A statement of the capital, surplus, dividends, and net earnings of the National banks of Pennsylvania, in Philadelphia, and in Pittsburgh, separately, as shown by their reports made to the Comptroller of the Currency, with the ratios of dividends to capital, and to capital and surplus, and of earnings to capital and surplus, semi-annually, from March 1, 1869, to September 1, 1878.

3. A list of the National banks in Pennsylvania, including Philadelphia and Pittsburgh, in operation on October 1, 1878, with the amount of capital stock and circulation of each.

Very respectfully,

JNO. JAY KNOX,
Comptroller

W. HAYES GRIER, ESQ.,
Chief of Bureau of Industrial Statistics,
Department of Internal Affairs, Harrisburg, Pa.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showing the condition of the National Banks in the State of Pennsylvania, at the close of business on Saturday, the 29th day of June, 1878.

Resources.

Loans and discounts,	$44,376,585	16
Overdrafts,	261,608	53
United States bonds to secure circulation,	26,196,950	00
United States bonds to secure deposits,	580,000	00
United States bonds on hand,	1,746,550	00
Other stocks, bonds, and mortgages,	3,063,773	69
Due from approved reserved agents,	4,144,244	07
Due from other national banks,	1,583,321	81
Due from State bank and bankers,	910,437	84
Real estate, furniture, and fixtures,	2,864,816	11
Current expenses and taxes paid,	327,595	46
Premiums paid,	440,159	35
Checks and other cash items,	559,279	98
Bills of other national banks,	943,958	00
Fractional currency,	58,980	72
Specie,	701,637	77
Legal tender notes,	3,490,604	00
U. S. certificates of deposit for legal tendar notes,	105,000	00
Five per cent redemption fund,	1,137,696	47
Due from United States Treasurer,	48,264	45
	$93,532,463	41

Liabilities.

Capital stock paid in,	$28,464,840	00
Surplus fund,	7,554,643	21
Other undivided profits,	1.690,403	07
National bank notes outstanding,	22,864,743	00
State bank notes outstanding,	40,717	00
Dividends unpaid,	196,018	50
Individual deposits,	30,158,759	54
United States deposits,	344,406	39
Deposits of United States disbursing officers,	19,138	63
Due to other national banks,	1,671,977	29
Due to State bank and bankers,	299,829	93
Notes and bills re-discounted,	123,939	26
Bills payable,	103,047	60
	$93,532,463	41

Number of banks, 180.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showing the condition of the National Banks in the State of Pennsylvania, at the close of business on Tuesday, the 1st day of October, 1878.

Resources.

Loans and discounts,	$43,310,698	88
Overdrafts,	256,386	44
United States bonds to secure circulation,	26,396,950	00
United States bonds to secure deposits,	605,000	00
United States bonds on hand,	2,016,400	00
Other stock, bonds and mortgages,	3,225,212	79
Due from approved reserve agents,	4,324,795	52
Due from other national banks,	1,504,469	51
Due from State banks and bankers,	854,567	15
Real estate, furniture, and fixtures,	2,978,307	24
Current expenses and taxes paid,	493,272	04
Premiums paid,	428,878	85
Checks and other cash items,	567,493	06
Bills of other national banks,	765,338	00
Fractional currency,	50,866	70
Specie,	889,957	18
Legal tender notes,	3,329,432	00
U. S. certificates of deposit for legal tender notes,	95,000	00
Five per cent. redemption fund,	1,152,383	33
Due from United States Treasurer,	52,810	50
	$93,298,219	19

Liabilities.

Capital stock paid in,	$28,469,840	00
Surplus fund,	7,473,378	78
Other undivided profits,	2,092,043	76
National bank notes outstanding,	23,050,078	00
State bank notes outstanding,	40,543	00
Dividends unpaid,	85,687	85
Individual deposits,	30,378,289	63
United States deposits,	370,222	88
Deposits of United States disbursing officers,	11,901	61
Due to other national banks,	1,031,724	14
Due to State banks and bankers,	174,499	98
Notes and bills re-discounted,	53,009	56
Bills payable,	67,000	00
	$93,298,219	19

Number of banks, 181.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showing the condition of the National Banks in the city of Philadelphia, at the close of business on Saturday, the 29th day of June, 1878.

Resources.

Loans and discounts,	$40,840,932	78
Overdrafts,	25,786	83
United States bonds to secure circulation,	13,553,700	00
United States bonds to secure deposits,	250,000	00
United States bonds on hand,	2,681,400	00
Other stocks, bonds, and mortgages,	1,713,415	09
Due from approved reserve agents,	3,966,378	04
Due from other national banks,	2,522,763	20
Due from State banks and bankers,	437,648	25
Real estate, furniture, and fixtures,	2,643,401	30
Current expenses and taxes paid,	240,670	72
Premiums paid,	442,119	39
Checks and other cash items,	431,464	54
Exchanges for clearing-house,	5,439,031	93
Bills of other national banks,	939,349	00
Fractional currency,	28,366	21
Specie,	2,018,094	32
Legal tender notes,	4,863,700	00
U. S. certificates of deposit for legal tender notes,	4,800,000	00
Five per cent. redemption fund,	596,804	00
Due from United States Treasurer,	58,003	01
	$88,493,028	61

Liabilities.

Capital stock paid in,	$16,843,000	00
Surplus fund,	7,315,970	51
Other undivided profits,	1,236,028	53
National bank notes outstanding,	11,402,760	00
State bank notes outstanding,	13,766	00
Dividends unpaid,	51,897	10
Individual deposits,	42,412,536	24
United States deposits,	217,130	94
Due to other national banks,	7,063,348	03
Due to State banks and bankers,	1,861,591	26
Notes and bills re-discounted,	15,000	00
Bills payable,	60,000	00
	$88,493,028	61

Number of banks, 31.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showing the condition of the National Banks in the city of Philadelphia, at the close of business on Tuesday, the 1st day of October, 1878.

Resources.

Loans and discounts,	$42,074,444	04
Overdrafts,	25,037	15
United States bonds to secure circulation,	13,703,700	00
United States bonds to secure deposits,	250,000	00
United States bonds on hand,	2,780,450	00
Other stocks, bonds, and mortgages,	1,704,513	05
Due from approved reserve agents,	4,826,938	02
Due from other national banks,	2,553,683	51
Due from State banks and bankers,	499,201	62
Real estate, furniture, and fixtures,	2,649,985	13
Current expenses and taxes paid,	565,279	68
Premiums paid,	398,468	93
Checks and other cash items,	404,555	69
Exchanges for clearing-house,	6,709,347	32
Bills of other national banks,	775,103	00
Fractional currency,	23,339	61
Specie,	2,265,692	38
Legal tender notes,	3,764,554	00
U. S. certificate of deposit for legal tender notes,	3,910,000	00
Five per cent. redemption fund,	611,554	00
Due from United States Treasurer,	32,103	01
	$90,527,950	14

Liabilities.

Capital stock paid in,	$16,843,000	00
Surplus fund,	7,313,099	53
Other undivided profits,	1,614,485	51
National bank notes outstanding,	11,730,429	00
State bank notes outstanding,	13,760	00
Dividends unpaid,	41,972	10
Individual deposits,	42,795,881	25
United States deposits,	197,946	66
Deposits of United States disbursing officers,		
Due to other national banks,	7,888,615	63
Due to State banks and bankers,	2,028,760	64
Notes and bills re-discounted,		
Bills payable,	60,000	00
	$90,527,950	14

Number of banks, 31.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showing the condition of the National Banks in the City of Pittsburgh, at the close of business on Saturday, the 29th day of June, 1878.

Resources.

Loans and discounts,	$17,458,152	48
Overdrafts,	39,191	69
United States bonds to secure circulation,	6,354,500	00
United States bonds to secure deposits,	200,000	00
United States bonds on hand,	587,200	00
Other stocks, bonds, and mortgages,	581,174	50
Due from approved reserve agents,	1,315,426	43
Due from other national banks,	581,657	18
Due from State banks and bankers,	183,103	52
Real estate, furniture, and fixtures,	1,356,873	55
Current expenses and taxes paid,	112,006	38
Premiums paid,	107,758	46
Checks and other cash items,	119,488	01
Exchanges for clearing-house,	514,911	72
Bills of other national banks,	244,609	00
Fractional currency,	14,112	60
Specie,	244,875	42
Legal tender notes,	1,704,234	00
Five per cent. redemption fund,	280,329	55
Due from United States Treasurer,	23,782	26
	$32,023,386	75

Liabilities.

Capital stock paid in,	$10,350,000	00
Surplus fund,	3,019,328	57
Other undivided profits,	474,760	06
National bank notes outstanding,	5,510,368	00
State bank notes outstanding,	4,235	00
Dividends unpaid,	65,615	00
Individual deposits,	11,167,952	65
United States deposits,	10,031	08
Deposits of United States disbursing officers,	120,644	85
Due to other national banks,	633,264	99
Due to State banks and bankers,	595,218	49
Notes and bills re-discounted,	61,968	06
Bills payable,	10,000	00
	$32,023,386	75

Number of banks, 22.

ABSTRACT

Of Reports made to the Comptroller of the Currency, showning the condition of the National Banks in the city of Pittsburgh, at the close of business on Tuesday, the 1st day of October, 1878.

Resources.

Loans and discounts,	$16,607,114	68
Overdrafts,	63,844	40
United States bonds to secure circulation,	6,454,500	00
United States bonds to secure deposits,	304,500	00
United States bonds on hand,	678,500	00
Other stocks, bonds, and mortgages,	586,335	33
Due from approved reserve agents,	1,712,972	90
Due from other national banks,	599,800	12
Due from State banks and bankers,	208,257	11
Real estate, furniture, and fixtures,	1,471,113	67
Current expenses and taxes paid,	158,499	99
Premiums paid,	89,360	40
Checks and other cash items,	109,562	23
Exchanges for clearing-house,	584,142	99
Bills of other national banks,	436,121	00
Fractional currency,	14,192	90
Specie,	371,528	16
Legal tender notes,	2,106,492	00
Five per cent. redemption fund,	286,365	15
Due from United States Treasurer,	19,687	95
	$32,862,890	98

Liabilities.

Capital stock paid in,	$10,350,000	00
Surplus fund,	3,036,929	35
Other undivided profits,	490,505	82
National bank notes outstanding,	5,715,216	00
State bank notes outstanding,	4,235	00
Dividends unpaid,	65,210	25
Individual deposits,	11,133,314	87
United States deposits,	121,238	91
Deposits of United States disbursing officers,	163,824	20
Due to other national banks,	869,425	31
Due to State banks and bankers,	855,984	75
Notes and bills re-discounted,	47,006	52
Bills payable,	10,000	00
	$32,862,890	98

Number of banks, 22.

NATIONAL BANKS IN THE STATE OF PENNSYLVANIA,

With the amount of capital stock and circulation of each, October 1, 1878, as shown by the books of the Comptroller of the Currency.

LOCATION.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Allegheny,	Allegheny,	First National Bank,	198	$350,000	$315,000
Do.	do.	Second do.	776	150,000	117,000
Do.	do.	Third do.	2235	200,000	90,000
Do.	do.	German do.	2261	200,000	105,300
Lehigh,	Allentown,	Second do.	373	200,000	180,000
Do.	do.	Allentown do.	1322	500,000	180,000
Blair,	Altoona,	First do.	247	150,000	135,000
Lebanon,	Annville,	Annville do.	2384	50,000	45,000
Schuylkill,	Ashland,	Citizens' do.	2280	60,000	54,000
Bradford,	Athens,	First do.	1694	100,000	90,000
Centre,	Bellefonte,	do. do.	459	100,000	90,000
Columbia,	Berwick,	do. do.	568	75,000	27,000
Northampton,	Bethlehem,	do. do.	138	300,000	270,000
Do.	do.	Lehigh Valley National Bank,	2050	300,000	270,000
Indiana,	Blairsville,	First do.	867	80,000	72,000
Columbia,	Bloomsburg,	do. do.	293	50,000	45,000
Berks,	Boyertown,	National Bank of,	2137	100,000	90,000
Bucks,	Bristol,	Farmers' Nat'l Bank of Bucks Co.,	717	92,220	82,990
Jefferson,	Brookville,	Jefferson County National Bank,	2392	35,000	
Fayette,	Brownsville,	First do.	135	75,000	67,500
Do.	do.	Monongahela do.	648	200,000	180,000
Butler,	Butler,	First do.	309	70,000	63,000
Luzerne,	Carbondale,	do. do.	664	110,000	45,000
Lehigh,	Catasauqua,	National Bank of,	1411	500,000	270,000
Franklin,	Chambersburg,	do.	593	260,000	234,000
Delaware,	Chester,	First National Bank,	332	100,000	90,000
Do.	do.	Delaware County National Bank,	355	300,000	198,000
Clarion,	Clarion,	First do.	774	100,000	90,000
Clearfield,	Clearfield,	do. do.	768	100,000	90,000
Do.	do.	County do.	855	100,000	67,500
Chester,	Coatesville,	National Bank of Chester Valley,	575	200,000	180,000
Lancaster,	Columbia,	First National Bank,	371	200,000	177,300
Do.	do.	Columbia do.	641	500,000	270,000
Crawford,	Conneautville,	First do.	143	100,000	90,000
Fayette,	Connellsville,	do. do.	2329	50,000	45,000
Montgomery,	Conshohocken,	do. do.	2078	150,000	135,000
Erie,	Corry,	do. do.	605	100,000	90,000
Do.	do.	Corry do.	569	100,000	90,000
Montour,	Danville,	First do.	325	150,000	135,000
Do.	do.	Danville do.	1078	200,000	180,000
Chester,	Downingtown,	Downingtown National Bank,	661	100,000	90,000
Bucks,	Doylestown,	Doylestown do.	573	105,000	94,500
Northampton,	Easton,	First do.	1171	400,000	360,000
Do.	do.	Easton do.	1233	500,000	450,000
Do.	do.	Northampton County do.	2385	100,000	45,000
Erie,	Erie,	First do.	12	150,000	145,500
Do.	do.	Second do.	606	300,000	260,000
Do.	do.	Keystone do.	535	250,000	155,600
Do.	do.	Marine do.	870	150,000	135,000
Venango,	Franklin,	First do.	189	100,000	90,000
Armstrong,	Freeport,	do. do.	2286	50,000	45,000
Adams,	Gettysburg,	do. do.	311	100,000	90,000
Do.	do.	Gettysburg do.	611	145,150	130,500
Erie,	Girard,	First do.	54	100,000	90,000
York,	Glen Rock,	do. do.	435	75,000	67,500
Franklin,	Green Castle,	do. do.	1081	100,000	90,000
Mercer,	Greenville,	do. do.	249	125,000	108,000
Do.	do.	Greenville Nat'l B'k of W. Greenv'e	2251	110,000	67,760
York,	Hanover,	First National Bank,	187	255,500	239,500
Butler,	Harmony,	Harmony do.	2335	50,000	45,000
Dauphin,	Harrisburg,	First do.	201	100,000	90,000
Do.	do.	Harrisburg do.	580	300,000	270,000
Montgomery,	Hatboro',	Hatboro' do.	2253	65,000	45,000
Blair,	Hollidaysburg,	First do.	57	50,000	45,000
Wayne,	Honesdale,	Honesdale do.	644	300,000	162,000
Chester,	Honeybrook,	First do.	1676	100,000	90,000
Huntingdon,	Huntingdon,	do. do.	31	150,000	135,000
Indiana,	Indiana,	do. do.	313	200,000	180,000
Montgomery,	Jenkintown,	Jenkintown do.	2249	70,000	45,000
Cambria,	Johnstown,	First do.	51	60,000	54,000
Armstrong,	Kittanning,	do. do.	69	200,000	199,500
Berks,	Kutztown,	National Bank of,	1875	60,000	50,000
Lancaster,	Lancaster,	First National Bank,	333	210,000	203,000
Do.	do.	Farmers' do.	597	450,000	405,000
Do.	do.	Lancaster County National Bank,	683	300,000	270,000
Montgomery,	Lansdale,	First do.	430	100,000	90,000
Lebanon,	Lebanon,	do. do.	240	50,000	45,000

NATIONAL BANKS—Continued.

Location.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Lebanon,	Lebanon,	Lebanon National Bank,	680	$200,000	$180,000
Do.	do.	Valley do.	655	100,000	90,000
Carbon,	Lehighton,	First do.	2308	75,000	67,500
Union,	Lewisburg,	Lewisburg do.	745	100,000	90,000
Do.	do.	Union do.	784	100,000	89,970
Mifflin,	Lewistown,	Mifflin County do.	1579	100,000	90,000
Clinton,	Lock Haven,	First do.	507	180,000	162,000
Schuylkill,	Mahanoy City,	do. do.	567	80,000	72,000
Lancaster,	Manheim,	Manheim do.	912	100,000	90,000
Do.	Marietta,	First do.	25	100,000	99,000
Carbon,	Mauch Chunk,	do. do.	437	400,000	360,000
Do.	do.	Second do.	469	150.000	135.000
Allegheny,	McKeesport,	First do.	2222	67,000	27.000
Crawford,	Meadville,	do. do.	115	100,000	90,000
Do.	do.	Merchants' do.	871	100,000	90,000
Cumberland,	Mechanicsburg,	First do.	380	100,000	90,000
Do.	do.	Second do.	326	50,000	49,500
Delaware,	Media,	First do.	312	100,000	90,000
Mercer,	Mercer,	do. do.	392	120,000	108,000
Do.	do.	Farmers' and Mechanics' Nat'l Bank	2256	80,000	27,000
Somerset,	Meyersdale,	First National Bank,	2258	50,000	30,600
Dauphin,	Middletown,	National Bank of,	585	100,000	90,000
Union,	Mifflinburg,	First National Bank,	174	100,000	90,000
Dauphin,	Millersburg,	do. do.	2252	100,000	90.000
Butler,	Millerstown,	German do.	2241	50,000	45,000
Northumberland,	Milton,	First do.	253	100,000	90,000
Do.	do.	Milton do.	711	100,000	90,000
Schuylkill,	Minersville,	First do.	423	50,000	45,000
Susquehanna,	Montrose,	do. do.	2223	50,000	45,000
Lancaster,	Mount Joy,	do. do.	607	100,000	90,000
Do.	do.	Union National Mount Joy Bank,	1516	125,000	112,500
Westmoreland,	Mount Pleasant,	First National Bank,	386	150,000	135,000
Lycoming,	Muncy,	do. do.	837	100,000	85,950
Beaver.	New Brighton,	National Bank of Beaver County,	632	200,000	108.000
Lawrence,	New Castle,	First National Bank,	562	150,000	135,000
Do.	do.	National Bank of Lawrence County,	1156	150,000	135,000
Bucks,	Newtown,	First National Bank,	324	100,000	90,000
Cumberland,	Newville,	do. do.	60	100,000	90,000
Montgomery,	Norristown,	do. do.	272	150,000	134,950
Do.	do.	Montgomery do.	1148	400,000	360,000
Erie,	North East,	First do.	741	50,000	45,000
Venango,	Oil City,	do. do.	173	200,000	180,000
Chester,	Oxford,	National Bank of,	728	125,000	112,500
Montgomery,	Pennsburg,	Farmers' National Bank,	2334	50,000	45,000
Do.	do.	Perkiomen do.	2301	100,000	90,000
Philadelphia,	Philadelphia,	First do.	1	1,000,000	799,800
Do.	do.	Second do.	213	300,000	250,000
Do.	do.	Third do.	234	300,000	263,490
Do.	do.	Sixth do.	352	150,000	135,000
Do.	do.	Seventh do.	413	250,000	225,000
Do.	do.	Eighth do.	522	275,000	247,500
Do.	do.	Bank of North America,	602	1,000,000	800,000
Do.	do.	Centennial National Bank,	2317	300,000	225,000
Do.	do.	Central do.	723	750,000	600,000
Do.	do.	City do.	543	400,000	360,000
Do.	do.	Commercial Nat'l Bank of Penn'a,	556	810,000	630,000
Do.	do.	Commonwealth National Bank,	623	208,000	187,200
Do.	do.	Consolidation do.	561	300,000	270,000
Do.	do.	Corn Exchange do.	542	500,000	388,050
Do.	do.	Farmers' and Mechanics' Nat'l Bank	538	2,000,000	1,000,000
Do.	do.	Girard National Bank,	592	1,000,000	600,000
Do.	do.	Kensington do.	544	250,000	225,000
Do.	do.	Keystone do.	2291	200,000	103,500
Do.	do.	Manufacturers' National Bank,	557	1,000,000	630,000
Do.	do.	Mechanics' do.	610	800,000	630,000
Do.	do.	National Bank of Commerce,	547	250,000	224,970
Do.	do.	do. Germantown,	546	200,000	180,000
Do.	do.	Nat'l Bank of the Northern Liberties,	541	500,000	450,000
Do.	do.	National Bank of the Republic,	1647	500,000	450,000
Do.	do.	National Security Bank,	1743	250,000	180,000
Do.	do.	Penn National Bank,	540	500,000	450,000
Do.	do.	Philadelphia do.	539	1,500,000	720,000
Do.	do.	Southwark do.	560	250,000	107,540
Do.	do.	Tradesmen's do.	570	200,000	180,000
Do.	do.	Union do.	563	500,000	405,000
Do.	do.	Western do.	656	400,000	324,000
Chester,	Phœnixville,	Farmers' and Mechanics' Nat'l Bank	1936	150,000	135,000
Do.	do.	National Bank of,	674	200,000	180,000
Allegheny,	Pittsburgh,	First National Bank,	48	750,000	45,000
Do.	do.	Second do.	252	300,000	270,000

NATIONAL BANKS—Continued.

Location.		Title.	No.	Capital.	Circulation.
County.	Town or city.				
Allegheny,	Pittsburgh,	Third National Bank,	291	$500,000	$364,050
Do.	do.	Fourth do.	432	300,000	270,000
Do.	do.	Fifth do.	1894	100,000	90,000
Do.	do.	Allegheny do.	722	500,000	450,000
Do.	do.	Citizens' do.	619	800,000	462,600
Do.	do.	Diamond do.	2236	200,000	45,000
Do.	do.	Duquesne do.	2278	200,000	45,000
Do.	do.	Exchange do.	1057	1,700,000	631,800
Do.	do.	Farmers' Deposit National Bank,	685	300,000	90,000
Do.	do.	First National Bank of Birmingham,	926	100,000	90,000
Do.	do.	German National Bank,	757	250,000	225,000
Do.	do.	Iron City do.	675	400,000	360,000
Do.	do.	Marine do.	2237	200,000	45,000
Do.	do.	Mechanics' do.	700	500,000	324,000
Do.	do.	Merchants' and Manuf's' Nat'l B'k,	613	800,000	270,000
Do.	do.	Metropolitan National Bank,	2279	200,000	67,500
Do.	do.	People's do.	727	1,000,000	800,000
Do.	do.	Pittsburgh Nat'l Bank of Commerce,	668	500,000	450,000
Do.	do.	Smithfield National Bank,	2281	200,000	44,950
Do.	do.	Tradesmen's do.	678	400,000	225,000
Do.	do.	Union do.	705	250,000	218,700
Luzerne,	Pittston,	First do.	478	500,000	450,000
Do.	Plymouth,	do. do.	707	100,000	90,000
Montgomery,	Pottstown,	National Bank of,	608	300,000	270,000
Schuylkill,	Pottsville,	Government National Bank,	1152	200,000	180,000
Do.	do.	Miners' do.	649	500,000	360,000
Do.	do.	Pennsylvania do.	1663	200,000	180,000
Bucks,	Quakertown,	Quakertown do.	2366	100,000	90,000
Berks,	Reading,	First do.	125	150,000	134,995
Do.	do.	Farmers' do.	696	400,020	360,000
Do.	do.	National Union Bank,	693	200,000	180,000
Montgomery,	Schwenksville,	National Bank of,	2142	100,000	90,000
Luzerne,	Scranton,	First National Bank,	77	200,000	45,000
Do.	do.	Third do.	1946	200,000	45,000
Snyder,	Selinsgrove,	First do.	357	100,000	90,000
Mercer,	Sharon,	do. do.	1685	125,000	112,500
Do.	do.	Sharon do.	2244	200,000	180,000
Cumberland,	Shippensburg,	First do.	834	75,000	67,500
Lehigh,	Slatington,	National Bank of.	2293	50,000	45,000
Montgomery,	Souderton,	Union National Bank,	2333	90,000	81,000
Chester,	Spring City,	National Bank of,	2018	150,000	128,000
Lancaster,	Strasburg,	First National Bank,	42	80,000	79,200
Northumberland,	Sunbury,	do. do.	1237	200,000	180,000
Susquehanna,	Susquch'a Depot,	do. do.	1053	100,000	90,000
Schuylkill,	Tamaqua,	do. do.	1219	150,000	135,000
Allegheny,	Tarentum,	do. do.	2285	50,000	45,000
Crawford,	Titusville,	Second do.	879	300,000	270,000
Bradford,	Towanda,	First do.	39	125,000	49,500
Do.	do.	Citizens' do.	2337	150,000	45,000
Schuylkill,	Tremont,	First do.	797	75,000	67,500
Wyoming,	Tunkhannock,	Wyoming do.	835	100,000	90,000
Erie,	Union City,	First National Bank of Union Mills,	110	50,000	45,000
Fayette,	Uniontown,	First National Bank,	270	100,000	90,000
Do.	do.	National Bank of Fayette County,	681	100,000	90,000
Warren,	Warren,	First National Bank,	520	100,000	90,000
Do.	do.	Citizens' do.	2226	50,000	45,000
Washington,	Washington,	First do.	586	150,000	135,000
Franklin,	Waynesboro',	do. do.	244	75,000	67,500
Greene,	Waynesburg,	Farmers' and Drover's Nat'l Bank,	839	150,000	90,000
Tioga,	Wellsborough,	First National Bank,	328	100,000	90,000
Chester,	West Chester,	do. do.	148	200,000	180,000
Do.	do.	National Bank of Chester County,	552	225,000	202,500
Luzerne,	Wilkes-Barre,	First National Bank,	30	375,000	337,500
Do.	do.	Second do.	104	450,000	400,500
Do.	do.	Wyoming do.	732	150,000	135,000
Lycoming,	Williamsport,	First do.	175	284,950	245,700
Do.	do.	City do.	2139	100,000	54,000
Do.	do.	Lumberman's National Bank,	734	100,000	85,000
Do.	do.	Lycoming do.	2227	100,000	30,000
Do.	do.	West Branch do.	1505	100,000	90,000
Do.	do.	Williamsport do.	1464	100,000	90,000
York,	Wrightsville,	First do.	246	150,000	135,000
Do.	York,	do. do.	197	300,000	299,950
Do.	do.	Farmers' do.	2228	200,000	180,000
Do.	do.	Western do.	2303	100,000	90,000
Do.	do.	York do.	604	500,000	450,000
Do.	do.	York County do.	694	300,000	270,000
				$55,662,840	$41,571,915

DIVIDENDS AND EARNINGS

Of the National Banks in the State of Pennsylvania, and of those in Philadelphia and Pittsburgh, with their ratios to capital and surplus fund, semi-annually, from March 1, 1869, to September 1, 1878, as reported to the Comptroller of the Currency.

	Number of banks.	Capital stock.		Surplus.		Dividends.		Net earnings.		RATIOS.		
										Dividends to capital.	Dividends to capital and surplus.	Earnings to capital and surplus.
Pennsylvania, for six months ending												
August 31, 1869,	146	$23,355,020	00	$4,810,860	00	$1,296,060	00	$1,709,036	00	5.55	4.60	6.07
February 28, 1870,	149	23,905,240	00	4,974,496	90	1,331,635	00	1,811,543	00	5.57	4.61	6.27
August 31, 1870,	149	23,920,240	00	5,370,668	00	1,334,560	00	1,566,199	00	5.58	4.55	5.35
February 28, 1871,	151	24,205.240	00	5,577,481	00	1,293,860	00	1,424,050	00	5.35	4.34	4.78
August 31, 1871,	151	24,545,240	00	5,781,467	00	1,284,381	00	1,568,270	00	5.23	4.24	5.17
February 28, 1872,	153	25,255,240	00	5,998,420	00	1,353,347	00	1,638,464	00	5.36	4.33	5.24
August 31, 1872,	155	26,575,090	00	6,359,964	00	1,332,980	00	1,612,149	00	5.21	4.17	5.05
March 1, 1873,	157	27,125.240	00	6,670,671	00	1,360,783	00	1,781,134	00	5.02	4.03	5.27
September 1, 1873,	158	26,660,580	00	7,019,439	00	1,384,980	00	1,841,315	00	5.19	4.11	5.47
March 1, 1874,	157	26,775,240	00	7,207,493	00	1,276,651	00	1,698,259	00	4.77	3.76	5.00
September 1, 1874,	156	26,761,590	00	7,435,885	00	1,365,441	00	1,574,945	00	5.10	3.99	4.61
March 1, 1875,	159	27,075,240	00	7,577,135	00	1,340,510	00	1,495,391	00	4.95	3.87	4.32
September 1, 1875,	162	27,625,240	00	7,643,549	00	1,385,087	20	1,433,186	00	5.01	3.93	4.06
March 1, 1876,	177	29,340,360	00	7,788,046	00	1,389,999	00	1,600,366	00	4.74	3.74	4.31
September 1, 1876,	178	28,593,940	00	7,745.661	00	1,349,317	00	1,273,834	00	4.72	3.71	3.51
March 1, 1877,	182	29,183,840	00	7.873,970	00	1,280,223	00	1,398.614	00	4.39	3.45	3.77
September 1, 1877,	180	28,959,340	00	7,659,045	98	1,180.820	70	1,027,504	00	4.08	3.22	2.81
March 1, 1878,	179	28,506,220	00	7,724,983	56	1,118,753	70	1,018,071	19	3.72	3.09	3.06
September 1, 1878,	178	28,262,940	00	7,532,387	11	1,008,793	20	885,110	27	3.56	2.81	2.47
Philadelphia, for six months ending												
August 31, 1869,	28	16,092,150	00	6,158,302	00	979,607	00	1,178,241	00	6.09	4.40	5.29
February 28, 1870,	29	16,355,150	00	6,197,217	00	978,758	00	1,150,597	00	5.98	4.34	5.10
August 31, 1870,	29	16,255,150	00	6,498,576	00	942,058	00	1,062,048	00	5.79	4.14	4.67
February 28, 1871,	29	16,255,150	00	6,537,247	00	957,258	00	1,000,230	00	5.90	4.20	4.39
August 31, 1871,	30	16,480,150	00	6,704,033	00	942,758	00	1,023,270	00	5.70	4.06	4.41
February 28, 1872,	30	16,935,000	00	6,804,709	00	971,750	00	1,088,431	00	5.74	4.09	4.59
August 31, 1872,	29	16,735,000	00	6,821,824	00	964.250	00	1,081,428	00	5.76	4.09	4.59
March 1, 1873,	29	16,735,000	00	6,916,170	00	975,930	00	1,095,087	00	5.83	4.13	4.63
September 1, 1873,	29	16,935,000	00	7,064,979	00	983,250	00	1,127,495	00	5.81	4.09	4.70
March 1, 1874,	29	16,935,000	00	7,105.792	00	972.250	00	1,035,211	00	5.74	4.04	4.31
September 1, 1874,	29	16,935,000	00	7,189,152	00	970,500	00	1,079,687	00	5.73	4.02	4.48
March 1, 1875,	29	16,935,000	00	7,189,641	00	982,572	00	1,004,393	00	5.80	4.07	4.16
September 1, 1875,	29	16,935,000	00	7,335,957	00	924,000	00	953,885	00	5.46	3.81	3.93

March 1, 1876,	30	17,135,000	00	7,404,982	00	919,680	00	1,029,843	00	5.37	3.75	4.20
September 1, 1876,	31	17,045,000	00	7,414,223	00	914,500	00	1,032,570	00	5.37	3.73	4.22
March 1, 1877,	31	17,095,000	00	7,455 151	00	920,300	00	896,573	00	5.38	3.75	3.65
September 1, 1877,	31	16,995,000	00	7,435,630	92	856,9 0	00	779,842	00	5.04	3.51	3.19
March 1, 1878,	31	16,813,000	00	7,454,739	83	855,140	00	918,132	01	5.07	3.52	3.73
September 1, 1878,	31	16,843,000	00	7,286,545	71	774,500	00	562,161	64	4.60	8.21	2.32
Pittsburgh, for six months ending												
August 31, 1869,	15	8,700,000	00	2,086,777	00	479,500	00	626,066	00	5.51	4.41	5.80
February 28, 1870,	15	8,700,000	00	2,171,125	00	417,500	00	561,630	00	5.14	4.12	5.17
August 31, 1870,	16	9,000,000	00	2,235,774	00	464,500	00	575,889	00	5.16	4.13	5.13
February 28, 1871,	16	9,000,000	00	2,297,158	00	463,500	00	561,177	00	5.15	4.10	4.97
August 31, 1871,	16	9,000,000	00	2,4 5,177	00	482,000	00	552,755	00	5.36	4.22	4.84
February 28, 1872,	16	9,000,000	00	2,481,622	00	487,000	00	557,482	00	5.41	4.24	4.86
August 31, 1872,	16	9,000,000	00	2,570,277	00	479,000	00	576,970	00	5.32	4.14	4.99
March 1, 1873,	16	9,000,000	00	2,595,413	00	498,000	00	512,236	00	5.53	4.30	4.42
September 1, 1873,	16	9,000,000	00	2,950,741	00	503,000	00	658,449	00	5.59	4.21	5.51
March 1, 1874,	16	9,000,000	00	2,983,604	00	459,000	00	524,024	00	5.10	3.83	4.37
September 1, 1874,	16	9,000,000	00	3,055,928	00	489,000	00	605,004	00	5.43	4.06	5.02
March 1, 1875,	16	9,000,000	00	3,093,585	00	471,000	00	530,426	00	5.23	3.89	4.39
September 1, 1875,	19	9,710,000	00	2,898,238	00	466,750	00	540,669	00	4.81	3.70	4.29
March 1, 1876,	23	10,530,000	00	2,936,881	00	462,000	00	532,046	00	4.39	3.43	3.95
September 1, 1876,	23	10,510,000	00	3,034,992	00	445,000	00	462,363	00	4.23	3.28	3.41
March 1, 1877,	22	10,350,000	00	3,047,091	00	418,000	00	4 8,936	00	4.04	3.12	3.05
September 1, 1877,	22	10,350,000	00	3,062,153	74	415,000	00	428,256	00	4.01	3.09	3.19
March 1, 1878,	22	10,350,000	00	3,082,310	91	391,000	00	451,862	04	3.81	2.93	3.39
September 1, 1878,	22	10,350,000	00	3,031,918	04	373,500	00	163,654	52	3.60	2.79	1.22

REVENUE OF THE COMMONWEALTH OF PENNSYLVANIA.

SUMMARY OF RECEIPTS, *at the State Treasury, from the 1st day of December, 1877, to the 30th day of November, 1878, both days inclusive.*

---

1. Lands,	$3,762 89	
2. Tax on corporation stock,	1,364,256 83	
3. Tax on coal companies,	530,186 46	
4. Tax on personal property,	413,117 64	
5. Tax on bank stock,	251,190 58	
6. Tax on net earnings or income,	39,149 89	
7. Tax on loans,	85,662 51	
8. Tax on gross receipts,	547,638 61	
9. Tax on gross premiums,	36,408 26	
10. Tax on tonnage,	404 23	
11. Tax on logs,	600 00	
12. Tax on writs, wills, deeds, &c.,	118,284 90	
13. Tax on certain offices,	2,150 70	
14. Notary public commissions,	10,300 00	
15. Bonus on charter,	23,278 33	
16. Foreign insurance companies,	221,230 17	
17. Commutation of tonnage tax,	460,000 00	
18. Collateral inheritance tax,	283,886 54	
19. Allegheny Valley Railroad Company, interest on bonds,	160,000 00	
20. Allegheny Valley Railroad Company, bond redeemed,	100,000 00	
21. Annuity for right of way,	10,000 00	
22. Accrued interest,	3,258 51	
23. Fees of the public offices,	32,162 62	
24. Geological survey,	423 00	
25. Escheats,	4,395 15	
26. Pennsylvania archives,	88 00	
27. Retailers' licenses,	358,776 92	
28. Tavern licenses,	327,721 28	
29. Theater, circus, &c., licenses,	3,468 86	
30. Billiard-rooms, &c., licenses,	6,535 56	
31. Eating-house, &c., licenses,	26,553 58	
32. Distillers' and brewers' licenses,	8,280 60	
33. Peddlers' licenses,	1,754 76	
34. Brokers' licenses,	7,870 44	
35. Patent medicine licenses,	4,308 51	
36. Pamphlet laws,	240 29	
37. Auctioneers' licenses,	469 76	
38. Refunded cash,	6,070 45	
39. Sale of public property,	6,331 67	
40. Fines and forfeitures,	457 89	
41. Unclaimed deposits,	426 60	
42. Dividends on stock,	80 00	
43. Miscellaneous,	150 00	
44. United States Government,	52,084 98	
		$5,513,417 97

EXPENDITURES OF THE COMMONWEALTH OF PENNSYLVANIA.

SUMMARY OF PAYMENTS, *at the State Treasury, from the 1st day of December, 1877, to the 30th day of November, 1878, both days inclusive.*

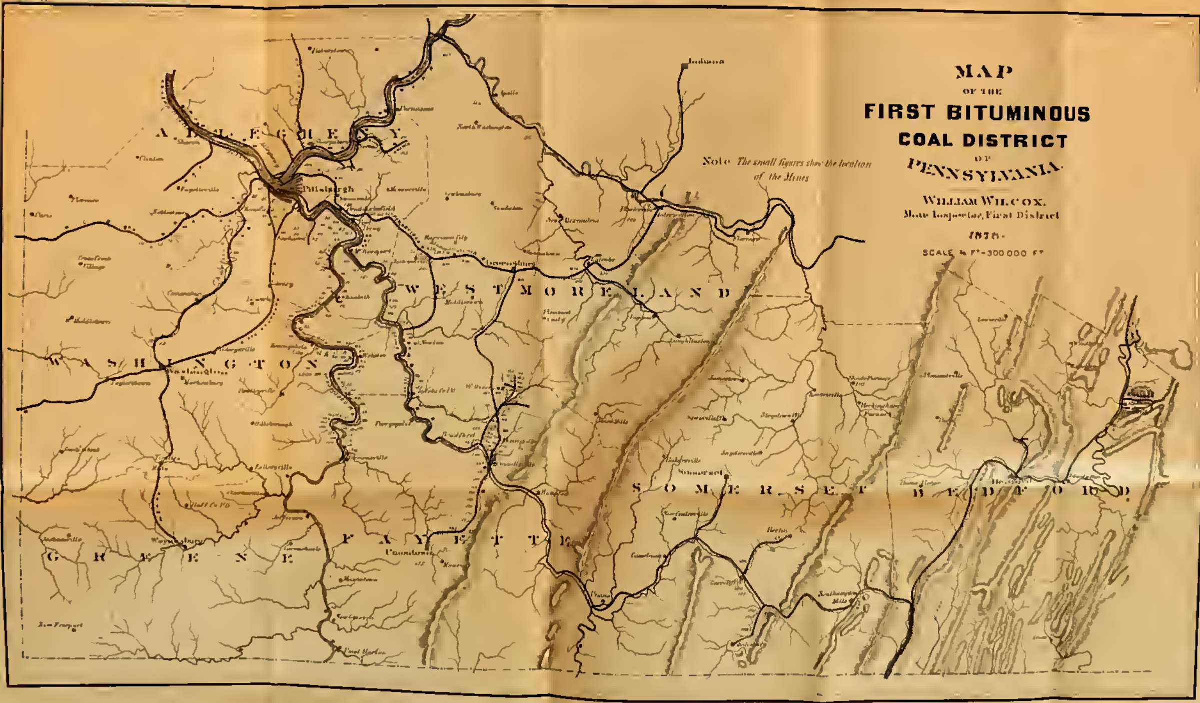
1. Expenses of government,	$1,443,974 90		
2. Commissioners of the Sinking Fund,	1,088,829 48		
3. Interest on loans,	1,204,613 52		
4. United States Government,	7,542 33		
5. Common schools,	782,084 91		
6. Soldiers' orphans' schools,	343,744 65		
7. Charitable institutions,	536,047 16		
8. Pensions and gratuities,	48,973 48		
9. Militia expenses,	160,687 74		
10. Riots,	584,811 63		
11. House of refuge,	31,250 00		
12. State Library,	5,600 00		
13. Public buildings and grounds,	14,899 96		
14. Board of Pardons,	3,378 36		
15. Port wardens, Philadelphia,	2,509 40		
16. Harbor master, Philadelphia,	9,499 99		
17. Penitentiaries,	81,277 50		
18. Pennsylvania board of centennial managers,	6,892 55		
19. State military board,	600 00		
20. Advertising for proposals, &c.,	14,577 30		
21. Stationery, fuel, &c.,	39,303 31		
22. Pennsylvania State Board of Agriculture,	3,598 82		
23. Seat of Government,	12,796 66		
24. Geological survey,	44,000 00		
25. Mechanics' high school of Pennsylvania,	229 30		
26. Municipal commission of Pennsylvania,	11,200 00		
27. Board of public charities,	8,350 00		
28. Inspectors of coal mines,	29,880 47		
29. Refunded collateral inheritance tax,	299 41		
30. Relief of J. Murray Moorhead,	67,870 88		
31. Sale of State stocks,	325 91		
32. Revenue commissioners,	900 00		
33. Pennsylvania Agricultural Society,	2,250 00		
34. Counsel fees and commissions,	19,828 39		
35. Assessors of bank stock,	14,985 64		
36. Escheats—payments,	2,163 01		
37. Special commissions,	6,705 82		
38. Mercantile appraisers,	2,179 08		
39. Military claims, per act of June 12, 1878,	8,610 32		
40. Miscellaneous,	6,661 70		
		$6,653,933 58	

VALUATION AND ASSESSMENT.

Counties.	Total amount State taxes returned by county commissioners.	Record of the valuation and taxes as made by the board of revenue commissioners, July 1, 1878.				Total amount State tax as now fixed by the court of Dauphin county.	Population.	Taxables.
		Amount of property subject to tax of 3 mills on dollar.	Amount of property subject to tax of 1 per ct. on dollar.	Total amount of tax on watches.	Gross amount of taxes due Commonwealth.			
Adams,	$3,003 15	$567,824	$99,153	$119 50	$2,814 50	$2,814 50	30,315	8,929
Allegheny,*	. . . . . .	14,962,500	152,000	5,500 00	51,909 50	51,990 50	262,373	66,662
Armstroug,	1,676 82	346,967	38,089	200 25	1,622 04	1,622 04	43,382	11,254
Beaver,	3,149 63	800,212	16,990	353 75	2,924 29	2,924 29	36,150	9,418
Bedford,	966 87	434,150	31,462	73 50	1,690 57	1,690 57	29,635	8,111
Berks,	11,470 24	3,467,500	296,378	321 00	13,687 28	11,470 24	106,739	27,339
Blair,	825 03	620,044	19,832	340 50	2,398 95	825 03	38,051	10,690
Bradford,	742 71	812,250	22,800	161 50	2,826 25	2,826 25	53,204	13,536
Bucks,	10,406 96	2,830,213	92,620	543 25	9,960 09	9,960 09	64,345	16,987
Butler,	694 49	807,500	27,287	301 50	2,996 87	2,996 87	36,501	12,593
Cambria,	1,248 85	354,293	4,953	80 50	1,192 91	1,192 91	36,569	8,853
Cameron,	69 50	33,250	300	68 00	170 75	69 50	4,273	1,328
Carbon,	487 59	627,000	11,196	303 50	2,296 46	487 59	28,144	6,918
Centre,	3,144 54	760,055	44,362	105 75	2,829 53	2,829 46	34,404	8,764
Chester,	17,457 33	5,890,000	217,791	1,213 50	21,061 41	14,457 33	77,806	20,076
Clarion,	1,365 43	282,539	25,795	215 25	1,320 82	1,320 82	26,960	8,312
Clearfield,	552 30	434,150	27,460	239 75	1,816 80	552 30	25,740	7,816
Clinton,	451 12	424,650	16,382	197 75	1,635 52	1,635 52	23,211	7,171
Columbia,	623 19	349,629	31,460	104 50	1,467 99	1,467 99	28,761	6,999
Crawford,	1,329 68	1,900,000	48,600	465 00	6,651 00	6,651 00	63,794	20,345
Cumberland,	5,171 97	1,434,450	111,811	313 50	4,984 96	4,984 93	43,912	12,975
Dauphin,	3.853 47	2,479,500	90,000	283 25	8,621 75	3,853 47	60,736	16,816
Delaware,	11.504 60	3,201,333	88,163	513 50	10,999 13	10,999 13	39,403	9,853
Elk,	279 81	49,974	75	121 25	271 92	271 92	8,488	2,370
Erie,	1,169 62	2,636,000	54,000	367 50	8,815 50	8,815 50	65,972	18,658
Fayette,	2,938 83	1,165,650	31,500	279 75	4,091 70	2,938 33	43,284	12,672
Forest,	172 64	29,289	350	25 50	116 87	116 87	4,010	771
Franklin,	5,877 22	1,409,998	124,548	179 75	5,655 22	5,655 22	45,365	12,069
Fulton,	206 94	76,000	7,811	17 50	323 61	323 61	9,360	2,658
Greene,	1,672 76	434,463	13,628	36 85	1,476 52	1,476 52	25,887	5,996
Huntingdon,	987 17	481,650	27,000	182 75	1,897 70	987 17	30,995	7,735
Indiana,	2,102 17	855,000	27,000	122 25	2,957 25	2,957 25	36,139	9,988
Jefferson,	702 65	285.000	11,953	114 25	1,088 78	1,088 78	21,656	6,959
Juniata,	282 26	327,750	18,000	32 75	1,196 00	282 26	17,390	4,439
Laneaster,	35,415 08	9,645,752	393,000	1,015 50	33,892 07	33,892 07	121,340	33,904
Lawrence,	637 81	641,250	31,500	296 75	2,535 50	2,535 50	27,298	7,085
Lebanon,	4,592 50	1,223,142	69,869	85 50	4,453 62	4,453 62	34,096	8,908
Lehigh,	9,063 78	2,142,068	185,986	449 50	8,726 56	8,726 56	56,796	17,971
Luzerne,	2,144 17	4,745,250	180,000	1,064 25	17,100 00	1,144 17	160,757	51,885
Lycoming,	1,576 54	950,000	63,000	329 50	3,809 50	1,576 54	47,620	12,615
McKean,	779 86	148,250	. . . .	. . . . .	444 75	444 75	8,825	2,735
Mereer,	2,195 44	855,000	90,388	487 00	3,955 88	3,955 88	49,979	14,267
Mifflin,	938 55	285,000	21,700	141 75	1,213 75	1,213 75	17,508	3,886
Monroe,	114 43	310,650	7,200	36 00	1,039 95	114 43	18,362	5,024
Montgomery,	19,937 02	5,068,000	251,457	1,418 25	19,136 82	19,136 82	81,212	20,245
Montonr.*	. . . . . .	236,550	13,500	. . . . .	844 65	844 65	15,344	3,518
Northampton,	10,463 34	2,332,712	238,356	681 75	10,063 45	10,063 45	61,433	16,930
Northumberland,	553 73	963,300	45,000	205 75	3,545 65	3,545 65	41,449	13,446
Perry,	1,613 76	336,965	38,066	70 00	1,461 55	1,461 55	25,486	7,733
Philadelphia,	168,693 41	46,349,127	753,768	14,789 75	161,375 11	161,375 11	670,022	164,510
Pike,	220 06	152,000	900	17 75	482 75	482 75	8,436	2,158
Potter,	28 95	153,900	. . . . .	. . . . .	461 70	461 70	11,265	3,242
Schuylkill,	1,810 05	2,327,500	79,634	654 50	8,433 34	1,810 05	116,428	27,341
Snyder,	645 70	190,000	37,297	54 25	997 22	997 22	15,607	4,147
Somerset,	2,442 44	624,688	28,332	54 50	2,211 88	2,211 88	28,228	7,740
Sullivan,	214 67	60,783	308	18 75	205 08	205 08	6,191	1,595
Susquehanna,	260 60	598,500	4.500	83 50	1,924 00	260 60	37,534	19,729
Tioga,	354 80	478,800	9,000	. . . . .	1,526 40	1,526 40	35,100	9,600
Union,	868 18	364,800	37,498	86 25	1,555 63	868 18	15,566	4,111
Venango,	2,706 85	659,888	16.675	456 25	2,602 66	2,602 66	47,935	8,022
Warren,	1,844 97	443,148	6,930	277 25	1,675 99	1,675 99	23,897	6,955
Washington,	2,444 79	1,409,800	68,816	323 00	5,210 56	2,444 79	48,483	13,715
Wayne,*	. . . . . .	246,905	2,265	. . . . .	763 36	763 36	33,188	8,651
Westmoreland,	2,132 10	1,197,000	76,500	398 50	4,754 50	2,132 10	58,720	17,205
Wyoming,	765 43	181,460	1,890	74 50	637 38	647 78	14,585	4,352
York,	8,798 75	2,907,000	221,400	298 00	11,233 00	8,798 75	76,216	19,317
	380,839 30	139,550,071	4,803,506	37,357 85	504,045 10	450,818 58	3,521,875	939,507

* No report by county commissioners.

No 8



MAP
OF THE
FIRST BITUMINOUS COAL DISTRICT
OF
PENNSYLVANIA.

WILLIAM WILCOX.
State Inspector, First District

1878.

SCALE ¼ IN = 300 000 FT

Note. The small figures show the location of the Mines

INDEX.

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REPORTS

OF

INSPECTORS OF BITUMINOUS COAL MINES.

FIRST DISTRICT—Wm. Wilcox, Inspector.

To the Honorable WILLIAM MCCANDLESS, *Secretary of Internal Affairs of the Commonwealth of Pennsylvania :*

SIR: I have the honor herewith to submit my second annual report of the inspection of coal mines, in the first bituminous coal district, for the year ending December 31, 1878, as required by act of Assembly of April 18, 1877, and giving a report of the general condition of the collieries in this district; also the number of fatal and non-fatal accidents during the year, given in tabular form, with remarks on the causes of the same.

As will be seen, the number of fatal accidents are thirty-two, and the non-fatal sixty-one, making a total of ninety-three. Owing to the great extent of the district, and the large number of collieries, it is quite possible that others may have occurred, and not come to my knowledge.

These causalties are, in some measure, due to the negligence and want of practical knowlege of mining on the part of those injured. Twenty-four lives were lost by falling slate, and one by falling coal. Seven lost their lives by explosion of steam boiler, and six were burned by explosions of carbureted hydrogen gas, but happily none were injured fatally from that cause. Of the twenty-four lives lost by falling slate, seven were under fifteen years, and fourteen under twenty-one years of age. Of those that were burned by explosive gas, four occurred by the parties going on top of falls with naked lights, after being cautioned against doing so by the mining bosses. The other two occurred by want of knowledge on the part of those injured.

This list of accidents may seem large; but, when we take into account the estimated number of persons employed, the wide extent of territory over which they are scattered, and the number of tons of coal mined, together with the dangerous occupation of mining in this district, the wonder is that it is not larger, yet a number of them could be prevented if a little more care was exercised on the part of the miners, and, I hope, that my next annual report may show some improvement in this as well as in other respects.

By data furnished me by the operators of this district, I have been enabled to estimate the average number of persons employed, and the amount of coal mined and shipped to market during the year, also to estimate the number of tons mined per each life lost, and which, I think, will compare favorably with other great mining districts of the world. It will be seen that the estimated number of tons produced per each life lost was 292,902. And the amount produced per each non-fatal accident 153,652, and for each accident 100,805 tons were produced. I have made no comparative tables of accidents with those of other years, because their is no data furnished by which I can do so, the law having been but a short time in operation, and, therefore, the necessary information is wanting. I have also made a map of the district giving the number, location, and names of all the collieries that come under the law in the district.

All the mines have been visited, many of them more than once during the year, and am glad to say that their condition is much better than it was one year ago. Many improvements have been made, both in ventilation, drainage, and other matters looking to the health and safety of the workmen, but very much remains to be done before all are in a satisfactory condition, and which, under the very best management, will require years to accomplish. But there is a marked improvement as compared with my first visits.

With very few exceptions the operators and employés seem ready and willing to carry out my suggestions and comply with the provisions of the ventilation law, and, I trust, that, in my next report, I may be able to show to a far greater extent the benefits resulting from the working of the law.

I have the honor to remain,
Very respectfully yours,
WILLIAM WILCOX,
Inspector of Bituminous Mines, First District.

MANSFIELD, *January 29, 1879.*

At the end of the year 1878, I issued the following circular to the operators of my district, asking them to make returns of the aggregate number of men employed, and the amount of coal shipments, etc. Reports were received from eighty-five mines, which enabled me to tabulate the results, and also to make an estimate of the whole number of men employed and the number of days worked, the aggregate number of tons mined, etc.:

OFFICE OF THE MINE INSPECTOR OF THE
FIRST BITUMINOUS COAL DISTRICT OF PENNSYLVANIA,
MANSFIELD VALLEY, ALLEGHENY COUNTY, PA.

To . . . .

I shall be very much obliged and assisted in making out my annual report for 1878, if you will be kind enough to fill out the blank below and return it to this office not later than the 15th of January, 1879. The facts furnished by you will be treated as strictly private and confidential, if you so desire, and will not be published only in the aggregate production of the first bituminous coal district.

Total number of tons mined of 2,000 pounds each.
Average number of persons employed inside.
Average number of persons employed outside.
Average number of mules employed.
Price paid for mining.
Number of days worked in 1878.
Estimated amount of powder used per ton mined.
Improvements made during 1878.

By data furnished me, I am enabled to arrive at the following results:

In the reports received from 85 mines, the aggregate was 3,671,455 tons.

Average production for each mine reported was $43,193\frac{51}{85}$ tons of 2,000 pounds each.

Average number of days worked by each mine reported,		175
Number of miners employed as reported,	6,552	
Number of day hands reported,	1,154	
Total number reported,		7,706
Average number of miners at each mine, as reported,		77
Average number of tons mined per day, per man,		$3\frac{35}{175}$
Average amount mined by each miner per year, in tons of 2,000 pounds each,		560
The aveage price paid per ton for mining,		42 cents.
Average amount earned by each miner,		$235 20
Amount spent on improvements, as reported, on the 85 mines,		$35,467
Estimated number of men employed as miners in the whole district,		15,198
Estimated number of men employed as day hands, drivers, etc.,		2,821
Total number employed, (estimated,)		18,011
Estimated amount of coal produced in the whole district, in tons of 2,000 pounds each, for the year, exclusive of nut coal and slack,		9,372,881
The number of fatal accidents in 1878,	32	
Number of non-fatal accidents,	61	
Total number of accidents,		93
Estimated number of tons produced, per each fatal accident,		292,902
Estimated number of tons produced, per each non-fatal accident,		153,653
Estimated number of tons produced, per each accident,		100,805
Number of persons having legs broken,	7	
Number of persons having arms broken,	3	
Number burned by explosive gas,	6	
Number of persons hurt by coal wagons,	7	
Number hurt by various causes,	31	
Number killed by falling slate,	24	
Number killed by falling coal,	1	
Number killed by boiler explosion,	7	
Number hurt by boiler explosion,	7	
Total number of accidents,		93
Number of fans in operation,		7
Number of fans erected in 1878,		2
Number of furnaces in operation,		43
Number of furnaces built in 1878,		30
Number of shafts sunk in 1878,		33
Number of furnaces improved in 1878,		2
Number of mines in operation in 1878,	217	
Number of mines not in operation,	17	
Total number of mines,		244

Mine Ventilation.

Much has been said and written on the subject of mine ventilation, and it is unnecessary for me to give any extended remarks, more especially as so many learned books are to be had, and anything which I might say would only be a repetition of what others have written and said on the same subject. I may, however, remark that in my experience, I find those mines that generate carbonic acid gas only, are worse ventilated than those that generate carburcted hydrogen, or what is known among miners as explosive gas. The reason is obvious. If a mine generates carbureted hydrogen, and the ventilation is deficient in quantity and quality, the effects are seen in explosions more or less violent in their nature, and the unfortunate victims are burned in a sickening and shocking manner. It will, therefore, be seen that the effects of bad ventilation are immediate in those mines, and a remedy is called for immediately, and an increase of ventilation ordered, which is so conducted as to reach every working place in the whole mine. This is the right and proper thing to do for men who risk their lives in the bowels of the earth to enrich the nation, and for which a mere pittance is received, are entitled to all the protection that the science of mining engineering can devise for their protection. But this is not always the case with those mines that generate carbonic acid gas. Ventilation in those mines is often neglected because the parties in charge think there is no immediate cause of danger. It is true there is no danger of an explosion when the air is so foul that the light will not burn, or with a dimness due to the presence of carbonic acid gas; but it is a great mistake to say that there is no danger. A man may not die immediately from the effects of carbonic acid gas, but his health may be so undermined as to cause him to fill a premature grave. So deleterious in its effects is this gas, that if the mine atmosphere be charged with eight per cent. a light will refuse to burn; and ten per cent. will produce instant death; if the atmosphere of a mine retain three per cent. of it, the strongest constitution will be affected by a prolonged occupation in such a mine. Our homes are lighted and ventilated through the doors and windows, sides and roof of our dwelling; but there are no doors and windows to give light and air to the miner in his dark chamber, and in our badly ventilated mines he can be seen grouping his way in the dark recesses of the mine with a light that barely suffices to make darkness visible.

But this is not the worst feature of bad ventilation. The unhealthy condition of the atmosphere in which he labors dazzles his brain, and unnerves his otherwise strong arm for labor, and one third of his time is lost through sickness and other causes, incidental to bad ventilation, and in consequence, his wife and family suffer for the want of the common necessaries of life. The stench created in some of our mines is enough to sicken the strongest animal, and I cannot close these remarks without calling the attention of mine owners and mining bosses to not only see that their mines are sufficiently well ventilated, but that pure air be carried to the face of all the headings, and that they try and cultivate more cleanly habits among their work people, not forgetting that pure, healthy air in a mine is just as necessary to sustain the mind and body in a healthy condition as is food and water. The drainage of mines is another important matter. It is not sufficient that the hauling roads be kept clean of mud and water, but the working places should be kept in a condition to enable the men to perform their labor with comfort.

Fans and Furnaces.

With respect to modes of ventilation there are several in practice in the first district. Of all the systems in practice the fan is undoubtedly the best. It has many advantages over the furnace as a ventilator, and to parties having steam boilers near the pit mouth is certainly the most economical, as steam can be generated, the fan put in motion at the required speed, and the amount of air put in circulation is assured with but little attention, whilst the furnace may be constructed for less money, the results attained are not so good. The chief drawback being—if the furnace is allowed to flag, which is too often the case, thirty or forty per cent. of the power is lost just as long as it remains in that condition. And here let me say a word to operators about to erect new furnaces: be sure and build them large enough, as a mistake cannot be made in this direction. The advantage of having a good surplus of air is well known to every practical mine manager. Many have built furnaces that were not of sufficient capacity, and had to re-place them with larger ones. No furnace in this district ought to be constructed of less capacity than twenty-five thousand cubic feet per minute. The Champion ventilator, manufactured by Fraser & Chalmers, of Chicago, is a good fan, and in point of economy and results given, I think it has no superior in this country.

Reports of Operators.

The fifth section of the law requires that "the mining boss shall measure the air current at least once a week at the inlet and outlet, and at or near the face of the headings, and keep a record of such measurement, and report the same to the inspector of his district once in every month." At the beginning of the year I furnished blank reports to all the operators, asking them to comply with this section of the law. Many did so at once, and have made their reports monthly, others have failed to comply, and when addressed on the subject, have plead ignorance of the law, &c. Many have made good and true reports, which are a credit to them and the firms they represent. Others have made reports not very creditable to themselves, and which, I hope, will not be repeated during the year 1879. In these reports the most important measurements, that at the face of the headings, are omitted, and in others the same amount of air is returned at the face of the headings as at the outlet, whilst others return the same amount every month. Such reports are useless, as they convey no correct idea of the true condition of the ventilation of the mine, and if the parties who make such reports think they are imposing on the credulity of the inspector, they are very much mistaken, and are welcome to all the comfort derived from that source.

Mine Timbers.

There has been a little trouble with respect to furnishing of mine timbers in the working places of the men. As the law was new in its workings, this was to be expected, but the great majority of the operators complied at once with the law, more especially the leading men in the businss of coal mining, who, I am glad to say, have rendered me all the assistance in their power, and with whom my business has always been both pleasant and agreeable.

New Inventions.

Messrs. H. B. Hays & Brother, whose mines are situated on the south side of Pittsburgh, have a coal cutting machine at work at their mines. This machine is the invention of F. M. Lechner, who claims for it many advantages over all other machines now in use, as well as the general mode of mining coal by hand. Should it prove a success, as I have no doubt it will, it will be appreciated by every intelligent miner in the district, as it is intended to relieve them of the most laborious part of the work of mining, that of under-cutting. Whilst machines of almost every kind have been invented, and the commerce of the world has been revolutionized, the science of mining coal has stood still, and the miner of our day leaves his bed in the small hours of the morning, shoulders his pick, and proceeds to the mine to begin the day's work of under-cutting. When the effects of his previous day's work are felt in the soreness of his arms and shoulders and the stiffened joints, and he wishes his day's labor was over. It would appear that every occupation of man has been both morally and physically benefited by machinery, except that of the miner. It is true some improvement has been made in tools, but he hews the coal in the same manner his forefathers did one hundred years ago. The essential features of the machine are the cutter bar, and the mode of operating it. This enters the coal at the same place that the miner makes the inbearing, and makes a cut four inches high, three feet wide, and five feet two inches deep in six minutes. It is mounted on wheels, and two men can handle it with ease. The motive power is compressed air, the compresser being located outside, and the receiver inside. A number of these machines are being manufactured in Pittsburgh for use in the mines here.

Mr. James Doran, superintendent of Jones & Laughlin's mines, southside Pittsburgh, has invented a machine by which the mine wagons open the door on the main-heading. The driver is seated on the front end of the trip, where, by touching a small catch, the door is closed after the trip of wagons has passed the door. I would have made a drawing for publication of this useful invention, but it was too late after I saw it.

DESCRIPTION OF MINES IN THE FIRST BITUMINOUS COAL DISTRICT.

The Union Coal Works, owned and operated by N. Graver & Co., limited, is situated in Penn township, Allegheny county. Is a drift opening. The upper main-heading is seven hundred and fifty yards long, and has five cross-heading, three of them through to daylight. The lower main-heading is twelve hundred yards long, and has four cross-headings, one out to daylight. These latter working have been abandoned for the present, and a new coal field is being opened by driving new headings, etc. The mode of working is single heading, room twenty-one feet wide, pillar twelve feet. Ventilation is by natural currents, but is not satisfactory, and three visits have been made here to urge the owners to improve it. A shaft has been commenced with that object in view, and it is contemplated by the owners to errect a good ventilating furnace. The drainage is good, water being discharged by natural gravity. William Fisher is superintendent; John Shorthose, mining boss.

The mines of the New York and Cleveland Gas Coal Company, are six in number—two at Plum creek, two at Sandy creek, and two at Turtle creek, in Allegheny county. Of the mines at Plum creek, one only has been operated the last year; the other mines at Sandy creek and Turtle creek have been operated very strongly.

The Plum creek mine is a drift opening, located in Penn township. The main-heading on the face of the coal is opened through the hill, and has four cross-headings, turned at right angles from the main-heading, two of them through to day. In the second hill the main-heading is driven six hundred yards, and has three cross-headings, two of them open to day. This mine generates carbonic acid gas, and in one of the cross-heading the ventilation was poor, but this heading has since been opened through to day, and answers the double purpose of air and water course.

The system of working is single heading, with air courses every one hundred and fifty yards, with room and pillar, or what is generally termed the block system. This mine gives employment to one hundred and fifty hands, and has a capacity of eleven thousand bushels per day. Harry Kerr is superintendent; Thomas Anderson, mining boss.

The New York and Cleveland Gas Coal Company's mines, at Sandy Creek, are located in Penn township, Allegheny county. These are two drift openings. No. 2 is opened on the face of the coal. The cross-heading are turned at right angles with the main-heading, and are one hundred and sixty yards apart, with air courses at regular distances. The main-heading is through the hill. Nos. 3 and 4 cross-heading is driven to an air course opened to day, and although there is four openings, ventilation is defective. Carbonic acid gas is generated in large quantities, with very little air current to remove it. N. Doak, superintendent, promised to remedy it by erecting a ventilating furnace at the head of the main-heading. There are one hundred and thirty men employed inside and outside, and the mine has a capacity of twelve thousand bushels per day. The roads are all iron, and in good condition. Drainage is good.

No. 1 is near No. 2. It consists of a main-heading and five cross-headings, all single, and is ventilated by natural currents, three of the headings are open to day In these I found a small current of air flowing to the outlets. The drainage is good. The roads are all laid with iron, dry, and in good condition. Samuel McManus, mining boss.

The Turtle Creek mines, owned and operated by the New York and Cleveland Gas Coal Company, are located one in Wilkins and one in Patton townships, Allegheny county, both are drift openings at considerable elevation above the railroad track.

Oak Hill, No. 3, is in Wilkins township, the main-heading runs back to the line of the company's coal, and has five cross-headings. The ventilation is produced by a good furnace and shaft, and a fair current of air was found circulating through all the headings, the mine generates a good deal of carbonic acid gas, which makes it one of the hardest to ventilate in the district. The workings are well laid out. The roads all laid with iron, dry, and in good condition.

System adopted here is single-heading, eight feet wide, room and pillar, and gives employment to seventy men and boys, and has a capacity of five thousand bushels per day. The men are well supplied with timber. John McIntosh is superintendent, and Jacob Gilliland, mining boss.

Oak Hill, No. 4, is owned and operated by the New York and Cleveland Gas Coal Company. Is situated in Patton township, Allegeheny county. Is a drift, and consists of main heading and ten cross-heading. This is the company's best mine, and is being very thoroughly operated. The workings are very well laid out, the heading being turned at right angles to each other, and all are connected every one hundred and fifty yards by air courses. The greater part of the workings are new, and but little noxious gas of any kind is generated ; but the time is not distant when it will generate large quantities of it, and artificial ventilation will be required to render it harmless. I suggested to the superintendent, Mr. McIntosh, that a good fan or furnace be erected for that purpose.

This mine gives employment to one hundred and seventy men, and has a capacity of twelve or fifteen thousand bushels per day.

Ventilation may be classed as fair ; drainage very good. The hauling roads are iron, dry, and in good order. John McIntosh is in charge outside; Jacob Gilliland, mining boss.

The Coal Bluff Mine, owned by James Logan, is situated on the Monongahela river, in Washington county. It is operated by Patterson & Co. Is a drift opened on the face of the coal. The main heading is fifteen hundred yards long, and has four double cross-headings. It has been in operation over twenty-five years, and is worked on the system of double headings. The ventilation is due to a shaft and furnace; the headings being all double, enables the mining boss to carry the air to the face of all the headings. Rooms are turned every thirteen yards, fron one side of the cross-heading only, pushed forward seventy-five yards, then abandoned, no pillars being removed. The mine is well drained and ventilated, roof is good, and the hauling roads are laid with iron, and in good condition. The men are well supplied with timber. This mine has a capacity of eight thousand bushels per day. There are three openings, both carbureted hydrogen and carbonic acid gas is generated here. Alexander Patterson, superintendent; James Forlong, mining boss.

Cliff mine, Scully & Co., operators, is situated on the Monongahela river, Washington county. Is a drift opened on the face of the coal. The main-heading is eighteen hundred yards long, and there is four double cross-headings. The system of working is double-heading room only, and ventilation is due to the furnace and brick stack, sixty feet high. Ventilation has always been satisfactory, until last spring, owing that the system of working here, adopted some twenty years ago, of leaving in the pillars and timber after the rooms are worked out, a "squees or creep" came on, and a part of four of the cross-headings were lost, and the ventilation of the mine endangered by the squees extending to the return air way. After consulting with Mr. Scully, it was agreed that a shaft should be sunk at the face of the main-heading of sufficient capacity to properly ventilate the mine, and on April last, the shaft was commenced and finished in June—eight feet diameter and one hundred and four feet deep, at the bottom of which the furnace will be located. This mine employs about ninety men, and has a capacity of eight thousand bushels per day. William Scully, superintendent; Robert Greenhalgth, mining boss.

The Cincinnati mine, situated on the Monongahela river, four miles below Monongahela City, in Washington county. This is a drift opening. The system of working is double-heading, and the ventilation is by furnace and shaft. The main-heading is one thousand yards long, and there is but two double cross-headings. The latter are one hundred and fifty yards apart, and from these headings the rooms are turned and driven seventy-five yards to the center of the block, when the timber is drawn and the room abandoned, and like all mines worked on the double-heading system, the ventilation is conducted to the face of the headings, but for want of a good stack on the top of the shaft and greater furnace capacity, the ventilation is rather feeble. Mr. Huston, who is operating the mine, promised to attend to it. The mine has a capacity of three thousand bushels per day, and has been operated very little the last year. John Huston, superintendent.

The Allison mine. owned and operated by Jonathan Allison, is situated on the Chartiers Valley railroad, five miles north of Washington, Washington county, is a drift opening worked the single heading system, and ventilated by the natural forces. The main heading is six hundred yards long, and has two cross-headings, one hundred and fifty yards apart, one of them is through to day. The main heading is connected with an air course running to day. There is three openings to day, and a fair current of air was found in all the heading. The hauling roads are well drained, and laid with iron, and Mr, Allison has a good map of the mine. About twenty-five hands are employed here. The mine has a capacity of three thousand bushels per day.

V. Harding's shaft is situated three miles north of Washington, Washington county, and consists of two shafts one hundred and fifty feet deep. One of the shafts is set apart for ingress and egress, and is also used as the down-cast for ventilation. A good stairway has been erected for use of the men in entering and leaving the mine. The main heading is three hundred and fifty yards long, and there is eight cross-headings, ninety yards apart. Rooms are worked twenty-four feet wide. No pillars are drawn on account of water. The ventilation and drainage is in fair condition. About thirty hands are employed here. Capacity two thousand bushels per day.

Robbins & Jenkins' mine is situated near McKeesport, on the Monongahela river, and in Allegheny county. It is a drift opening, worked on the single heading system, and ventilated by the natural forces, and consists of one main-heading and five cross-headings, and is connected with the Penney mine, on the Youghiogheny river. The system of working here is room and pillar. The room is twenty-one feet wide and pillar twelve feet, which is removed when the room has reached the center of the block. The drainage is good, and there are five openings to the mine; but the ventilation was fund defective, and I suggested that a number of doors and stoppings be erected to conduct the air current around the face of the headings for proper ventilation. This mine should have a fan or furnace. There has also been some complaints about timber, which, I hope, has been remidied. The mine was not in operation at the time of my visit. Joseph Jenkins, superintendent; M. Jenkins, mining boss.

The Lain Colliery, operated by the Sandy Run Coal Company, is located in Broad Top township, Bedford county. Is a drift opened in the Cook seam. The coal from this vein is soft, semi-bituminous in character, and varies in thickness from three feet to five feet. The coal lies in troughs or basins. The roof is hard soapstone or slate, and, in mining operations, is easily supported. The main-heading is about three hundred yards long, and is twisted in all directions, in order to keep an even grade. There are three cross-headings on the pitch of the coal seam, from these latter rooms are turned. The drainage is in fair condition; but the ventilation has been much neglected. Some little attempt at ventilation had been made by placing a small fire at the mouth of one of the drifts, and erecting a small wooden stack, but it was entirely inadequate to the proper ventilation of the mine. The timber was not furnished as directed in section five of the law. I called the attention of the superintendent, Richard Langdon, to the matter, and, in our correspondence, he informs me that everything has been done that the law requires.

The Mansfield Coal and Coke Company's mines are located at Mansfield, Allegheny county, and are two in number. Both are drift openings, worked on the block system, and ventilated by the natural forces. The oldest consists of two main-headings one hundred and fifty yards apart, and four cross-headings, three of them out to day. There is but little noxious gases generated here, and a fair current of air circulated through the mine, owing to the fact that there are twelve openings all in good order. The hauling roads are laid with iron, are dry, and in good condition, and the men are well supplied with mine timber.

The new drift has been opened this year. The main-heading is three hundred yards long, and there are two cross-headings, one hundred and forty yards apart. These have been connected by an air course, and a shaft eighty-five feet deep has been sunk near the face of the main-heading for ventilation. The works have been further improved by building a new outside track, which necessitated the bridging a ravine in two places. These improvements have been made at considerable expense to the company. Ninety-six men are employed inside, and ten outside. Robert Bell, superintendent; Samuel McDowell, mine boss.

The Duquesne mines, operated by the Duquesne Coal Company, is in Wilkins township, Allegheny county. It is a drift opening, and employs one hundred and twelve men and six mules inside, and fifteen hands outside. There are seven openings, but only two large enough to be of much service for ventilation. It is worked on the block system. Besides the main-heading, there are five cross-headings. Three of the cross-headings are out to day. These cross-headings are one hundred and sixty yards apart. Some of them are connected by air courses. In two of these headings the ventilation is very defective, the atmosphere being charged with smoke and carbonic acid gas. At one of the outlets there was a current air of nineteen hundred and ninety-five feet per minute. The attention of the president, Mr. Alexander Gordon, was called to the condition of the mine, asking him to remedy it by applying artificial ventilation, and erect the necessary doors, etc. The hauling roads are laid with iron, are dry, and in good condition, and the mine is well laid out, and has a capacity of nine thousand bushels per day. Alexander Gordon, superintendent; John Green, mine boss.

The Jackson mines, on the Baltimore and Ohio railroad, near Dawson station, Fayette county, is a drift opening, operated by the Jackson Mine Company. The working consists of main-heading, three hundred yards long, and two cross-headings, averaging two hundred yards long and eighty-five yards apart. Rooms are driven from one cross-heading to the other, and are fourteen feet wide, leaving a pillar of eight or nine feet, which is not removed. The mine is in fair condition, both as to drainage and ventilation. Twenty-seven men and three mules are employed here. Taylor Cochran, superintendent; John Colter, mining boss.

The Nimick mine, operated by Thomas Fox, is located in Union township, Allegheny county, and is a drift opening. Main-heading is one thousand yards long, with two cross-headings, one of which connects with an air course running to day. The small furnace, mentioned in my last report, has been re-placed by one a little larger; but is yet too small to ventilate this mine properly. Carbonic acid gas, black damp, is generated. There was a current of two thousand feet per minute at the face, and twenty-five hundred at the outlet. Twenty-two men and two mules are employed. Hugh McMurray, mine boss.

The Hampton mines, located in Wilkins township, Allegheny county, is a drift opening operated by John McIntyre. The main-heading is upwards of a mile in length, and the workings are laid out in two divisions, the first or right hand division consists of face-heading and six cross-headings. Five of them are open to day.

The Lack Hill workings consists of main-heading and three cross-headings one hundred and forty yards apart; the workings being connected with the first division by an air course. There is also a drift opening at the upper part of the working of division No. 2. There are a few doors and stopping, but generally the air is allowed to defuse through the working. There is no heavy air currents met with in the mine, owing to the number of openings, ten in number; but there was no noxious gases present. The company are about to open a new coal field, and a location for furnace has been selected, which will be put in operation as soon as required.

There are one hundred and forty hands employed here, and eight mules. The mine has been operated very steady the last year. Capacity ten thousand bushels per day. John Blythe, superintendent, John Duncan, mining boss.

Bigley's mine is at Alpsville, Allegheny coun'y, and is operated by a coöperative company of miners. It consists of two drifts. The main-heading is eleven hundred yards long, and is open through the hill. The lower main-heading, not in use, is connected with the cross-heading, and is also open through the hill. The cross-headings are seven in number, one hundred and eighty yards apart, with an average length of four hundred yards. One of these is nearly worked out, and another is being operated on. There is an excellent roof here. The ventilation by natural currents, and the mine is relieved of water by drain at the lower opening. Twenty-six men and two mules are employed here. The mine is in charge of Joseph Snyder.

The Osceola mine is located just below Alpsville, Allegheny county, and is operated by the Osceola Coal Company. It is a drift opening, and consists of main-heading, and five cross-heading, single. Ventilation is effected by the natural forces. In the upper range of working, there is a small shaft, and the lower cross-headings are connected with an heading running to day, which answers the double purpose of drainage and ventilation. In this air course, there was nine thousand six hundred and eighteen cubic feet of air in circulation through an opening of forty-two feet. The company intend to sink a shaft and erect a furnace for ventilation. There is one hundred and fifty-six men, and fifteen mules employed here. Mr. Jones has charge of the mines.

The White Ball mines, Youghiougheny, Coal Hollow Coal Company, is at Shaner station, Baltimore and Ohio railroad, and is a drift opening. The main-heading is on the end of the coal for eleven hundred yards, then on the face for nine hundred yards. It is worked on the single heading system. Ventilation is due to the shaft—ninety-five feet deep—and the fire under the boiler, and steam exhaust from the pump. The mine is troubled with water, which renders it difficult to keep the roads in good order. There are three openings, and one hundred and ten men, and twelve mules are employed. The cross-headings—seven in number—are one hundred and forty yards apart, with an average length of two hundred yards. The mine has been operated very steady the last year. About a year ago, a squees came on some of the headings, which caused some loss of coal; and the plan of leaving the pillars in has been abandoned, and room and pillar adopted. The hauling roads are laid with iron, and in fair condition. Some carbureted hydrogen gas is generated. Ventilation is directed to the face of the heading, and on going to the foot of the shaft, I found the air passage somewhat obstructed, which, I suggested, could be obviated by widening the bottom of the shaft. There is between eight and nine thousand cubic feet of air in circulation. M. Asborn, superintendent; mining boss, Joseph Thomas.

The Waverly mines, at Smithton, Westmoreland county, are operated by the Waverly Coal Company. Is a drift opening. It is worked partly on the double heading system, and ventilated by the natural forces. There are ninety-eight men, and eight mules employed inside. The ventilation is well taken care of, and is ample in the cold months of the year; but during the spring and fall months, when the temperature inside and outside is nearly equal, the ventilation is defective, and requires artificial means to be applied. This mine should have a fan or furnace at the highest opening to insure good ventilation. There is an opening near the back end of the workings, which acts as an inlet during the hot months, and has outlet in the cold months. The main-headings are double; over a mile in length, and there are six cross-headings, all single. The workings are well laid out with air courses at regular distances. The hauling roads dry, and laid with iron. Carbonic acid is generated to a considerable extent. Benjamin Braynell, mining boss.

The mines owned and operated by William H. Brown's heirs are the Keystone mines, McClosky road, the Cornell and Werling, the Old Eagle, and the Black Diamond. The Keystone mine is located at Saltsburg, on the Monongahela river. Is a drift opened through the hill, and ventilated and drained by natural forces. The workings are very extensive, and are laid out in three ranges. On one of these ranges the headings have an average length of eight hundred yards. This mine has upward of forty headings, and thirty-two thousand yards of hauling roads. The coal seam lies near the top of the hills, and is very favorably situated for natural ventilation, their being in all thirty-two openings to day. During the last year a new track has been built through the first hill, with forty pound iron rail, and a locomotive introduced in the mine to assist in hauling, and many other improvements of a general character have been made, which renders the mine in excellent condition. Upward of two hundred men are employed here. The mines are in charge of William S. Brown, superintendent, who informs me that, on October 5, 1874, a trial run was made, which resulted in the production and loading into boats on the river in a run of twelve hours and fifteen minutes, the amount of twenty-eight thousand bushels, or eleven hundred and twenty tons of screened coal, exclusive of nut coal and slack, a feat which he claims has never been equaled on the Monongahela river. C. H. Delo, mine boss.

The Old Eagle is located in Forward township, Allegheny county. This is another well ventilated mine. It consists of a drift opening, worked partly on the double-heading systems, and ventilated by a powerful furnace and brick stack eighty feet high. The main-headings are double, and are nine hundred yards long, and there are eight single cross-headings, all connected by a system of air ways. The air enters the mine at the lower opening, and sweeps the face of all the headings, and is then returned to the outcast. The furnace has a capacity of twenty-five thousand cubic feet of air per minute, which is ample for the ventilation of this mine. The mine has five openings, employs eighty men, and has a capacity of ten thousand bushels per day. John Perry, superintendent.

The Black Diamond is located in Carrol township, Washington county, is a drift opening, worked partly on the double-heading system, and ventilated by a furnace, shaft and brick stack. This is another well ventitated mine. The main-headings are double, and are fifteen hundred yards long. The cross-headings are twelve in number. Only a part of them in operation. The mine has six openings. The furnace is thirty-two feet long, with shaft and stack combined eighty-five feet high, and has a capacity of twenty-four thousand cubic feet per minute. The capacity of the mine is twelve thousand bushels per day, and employs one hundred and thirty men and boys. James Lonttit, superintendent.

The Cornell and Werling mine, located at Boston, Allegheny county, is a drift opening. The main-heading on the face of the coal is open through the hill, is one thousand three hundred yards long, and has two ranges of workings. There are two sets of main-headings and nine cross-headings. The workings are well laid out and in excellent condition. The cross-headings have an average length of four hundred yards, which are driven through before rooms are commenced. The hauling roads are all laid with iron, dry, and in good order. The headings are all eight feet wide and six feet high, and the mine has an excellent roof. Its ventilation is one of the very best in the district, effected by furnace thirty feet long, six and one half feet wide, and nine feet high, with double arch and brick stack eighty feet high and six and one half feet wide. These improvements were made the last year at considerable expense. This furnace has a capacity of forty thousand cubic feet per minute, which is sufficient to ventilate any mine in the district. The mine gives employment to two hundred and twenty-eight men. The haulage is partly done by mules and partly by machinery. Robert Cornell, superintendent; Frank Cornell, mine boss.

The Penny mine, located on the Youghiogheny river just above McKeesport, Allegheny county, is owned and operated by Lynch & Robinson. It is a drift opening. The main-heading is through the first and second hills. In the first hill a new coal field is being opened. The second hill is pretty well developed. Besides the main-heading there are five cross-headings, with an average length of four hundred yards. These headings are on the dip side of the workings, and the hauling is difficult, but the roads are all in good condition and laid with iron. The ventilation and drainage are by the natural forces and in fair condition. Three of the cross-headings being out to day, and all being connected by air-ways. One hundred and forty men and ten mules are employed here, and the capacity of the mine eleven thousand bushels per day. The owners contemplate erecting a good ventilating furnace at no distant day. David Lynch, superintendent; Thomas Briggs, mining boss.

The mines operated by H. C. Frick & Co. are eight in number, and are located in Fayette county. They are as follows: The Henry Clay, the Novelty, Morgan Upper, and Morgan Lower roads, Tip Top mines, the Valley mines, on the Mount Pleasant branch, and the Anchor mine, and the Ferguson slope, on the South-west Pennsylvania road. The Henry Clay is located at Broadford, is a slope one hundred and fifty feet deep, on a dip of thirty-five degrees, and employs forty men inside and outside, and is worked partly on the double-heading system. Ventilation is assisted somewhat by steam exhaust from the pump. The main-headings are double, one thousand one hundred feet long, and has eight cross-headings, two of which are working. These cross-headings are one hundred yards apart, and are eight feet wide and seven feet high. The hauling roads are in good order. Ventilation and drainage is in fair condition.

The Novelty mines are located near Broadford, on the Mount Pleasant branch. The system of working adopted here is the same as the Henry Clay. The ventilation and drainage are by the natural forces. There are two openings, and the mine has connection with the Morgan mine on the one side, and the mine of Cochran Brothers on the other, and the same air current very often ventilate both. Thirty-seven men are employed here.

The Morgan Lower drift is just above the Novelty mine, the workings being connected by air-ways. This is a drift opening, and gives employment to thirty-eight hands, inside and outside. This mine consists of a main-heading and two cross-headings, and has three openings. At one of the openings there was a current of four thousand three hundred and twenty feet in circulation per minute, but at the face of the workings it was too small to measure. There was a lack of stoppings and doors to assist ventilation.

The Morgan Upper drift is connected with the lower drift. It has two openings, a main-heading, and four cross-headings, and employs twenty-nine men inside and about the same number outside. At one of the openings there was a fair current of air in circulation, but the mining boss failed to get it to the face of the workings. This is a common failure in the coke region. There are too many openings made in the pillars. In some of the mines the pillars are gutted in such a manner it is next to impossible to conduct ventilation to the face of the headings. The drainage and hauling roads in the three above mines are in good condition, but the ventilation is defective. The mine atmosphere is mixed with carbonic acid gas and smoke from the coke ovens. There is no steady current in one direction for any length of time, and the same current is made to ventilate all three. I spoke to Mr. Frick about the condition of these mines, and suggested a remedy by erecting a good ventilating furnance at upper mine. John White, superintendent; James Leadbeater and S. R. Kane, mining bosses.

The Tip Top mine, located in Tyrone township, has just been leased from Charles H. Armstrong & Son, is a drift opening, and consists of but one heading, opened through the hill, and about five hundred yards long. Ventilation is by natural forces. About thirty-two men are employed here.

The Valley mines are located in Tyrone township, and consist of a drift opening, main-heading, double, and five cross-headings, single. The cross-headings are one hundred and eighty yards apart, connected by airways. Rooms are turned right and left from the cross-headings, and driven to the center of the block, then the pillar is removed. Ventilation has been improved by building a small ventilating furnace, and opening a shaft at the interior end of the mine, and the operators are contemplating putting in a steam pump for drainage purposes. Sixty men are employed here. Thomas Lynch, superintendent; James Jackson, mine boss.

The Anchor mine is a slope opening, and is situated near Dunbar. It was leased the last year from Henderson & Co. It is opened on a pitch of twelve degrees, and is three hundred yards long. There are three level-headings and five cross-headings, all single headings. The system of working is room twelve feet wide, no pillars being drawn. Many of the cross-headings show signs of considerable squees, brought on by this system of mining. The cross-headings are one hundred and eighty yards apart, with no regular system of airways, and in one of these headings the ventilation was defective. There was no second opening for ingress and egress provided. The attention of the superintendent, Mr. Lynch, was called to the facts, and he was asked to remedy them. Drainage is effected by steam pump at the foot of the slope, which also assists ventilation. Amos Sullivan, mining boss.

The Ferguson slope was leased in the spring of 1878 by this firm. It is located two miles south of Dunbar, on the South-west Pennsylvania road. It has been opened and operated since 1870 by Mr. Ferguson, one of the present firm. It is opened on the end of the coal on a fifteen degree dip for one thousand three hundred feet. Level-headings were commenced from both sides, near the foot. From these level-headings cross-headings run, and connect with old workings in the upper range of workings. The mode here is single headings and room only, no pillars being removed, except in the gutting process, so much practiced in the coke regions. The pillars are all too weak to resist the pressure from above, and signs of a "squees" was visible all over the mine. If the object of the parties who run the mine was to ruin it, they have succeeded admirably. I suggested that the headings be secured by timber; but it was neglected, and the greater part of the mine had to be abandoned, and is now full of water. The operators are about commencing operations, having secured more coal. It was here that James S. McCue and Isaac Mitchel were burned by explosive gas, November 23, whilst examining the mine for a second opening. The coke ovens, boiler, and machinery have been repaired, and the mine put in operation. Thomas Lynch, superintendent; James S. McCue, mining boss.

The Youghiogheny mine, operated by James O'Neil, located at Boston, Allegheny county, is a drift opening. It consists of main-heading and six cross-headings, and is worked on the system of single headings, room, and pillar, and ventilated by natural currents. There are four openings, two of the cross-headings being open to day. It is also connected by air course with the Cornell and Werling mine, by which it is partly supplied with air. The general condition of the mine is good, but the ventilation is not satisfactory. Artificial means are required here to proper ventilation of the workings. One hundred and twenty hands are employed here. Harry O'Neil, superintendent; Salis McGraw, mine boss.

The mine of Y. B. Corey & Co., is located at Braddockfield, Allegheny county. Is a drift opening. The main-heading on the face of coal is eleven hundred yards long, and open through the hill. It is worked on the single-heading system, ventilated by the natural forces. There are four openings. But in two of the cross-headings, a number of men were working beyond the air current, and the ventilation here was defective. The air being charged with carbonic acid gas and smoke from the lamps of the miners. There was not a single door in the mine to direct what small natural draft might exist. I made known the condition of the mine to Mr. Corey, and asked him to improve it. There are fifty-eight men and nine mules employed here. Capacity of the mine is about four thousand five hundred bushels per day. Superintendent, John Baldridge; mine boss, Andrew Brazenal.

The Lovedale mine, operated by Wood, Schrader & Co., is located near Elizabeth, Allegheny county. Is a drift opening, and employs one hundred and twenty men and thirteen mules. The system of working is single-heading room and pillar, and ventilation by natural means. There are ten openings. Many of the headings being open through to day, and all are through to each other, and not a single man is working in bad air. A new pit-mouth has been opened, and the hauling much improved, and improvements are being made inside. William Billingsley, superintendent, William M. Clay, mine boss.

The mines of the Penn Gas Coal Company are located in Westmoreland county. Are eight in number, and are as follows: Shaft No. 1, Shaft No. 2, Shaft No. 3, Coal Run mine, mines No. 3, mines No. 4, and the Penn mines, South side and North side. These mines are in charge of William Wilson, superintendent, and Mr. Wolf, engineer.

Shaft No. 1 is located at Irwin station, and consist of a shaft for hoisting, and a drift for ingress and egress. The drift also serves as inlet for ventilation. The mode of working is double-heading. The cross-headings are five hundred feet apart. The lower main-headings are three in number, and are two thousand yards long, and have twelve cross-headings. The upper main-headings are nine hundred yards long, and have four cross-headings, and connect with the air course at the head. These cross-headings have an average length of five hundred yards. The greater part of the air is received at the shaft, and is then conducted around the working in three divisions or splits, by means of doors and stoppings. It is then returned to the outlet by way of the lower main-heading. Ventilation is effected by a twelve feet Snyder steam-fan, which produces large quantities of air which is sent sweeping through the workings. There is a good roof here. The hauling roads, doors, and stoppings are well maintained, and the mine is a marvel of neatness and good order.

Shaft No. 2 is on the Youghiougheny railroad, one mile south of Irwin station. It consists of a shaft for hoisting, and a slope for ingress and egress. The mode of working is double-headings, room and pillar. Ventilation is effected by Syder steam fan, twelve feet in diameter, which is kept in constant operation, producing large volumes of air, which is divided into a number of splits, and sent to the face of all the headings. The workings are very large, and are divided into northside, upper and lower range, southside upper and lower range. The southside main-headings are fifteen hundred yards long, and the northside main-headings are eight hundered yards long. There are sixteen double cross-headings in operation. These are five hundred feet apart, and average six hundred yards long. There is a bad roof here, which is very troublesome, and requires the constant attention of the mining boss to prevent accidents. The mine has been very much improved, in a general way, the last year, and is now in very good condition. John Marsh, mining boss.

The Coal Run mine is situated at Irwin station, and consists of a drift opening. The plan of working is double heading, room and pillar. The workings are divided into lower range and upper range. The main-headings, on the lower range, are two hundred yards long, and have ten double cross-headings, four hundred yards long. In the main-headings, in the upper range, there are nine cross-headings, of an average length of five hundred yards. These headings run to the crop line, where a number of openings have been made for the admission of air, etc. Ventilation is effected by furnace and brick stack at the lower end of the workings, which has a capacity two thousand five hundred cubic feet of air per minute, and which is sent to every working place in the mine; and in all my visits to this mine, it has been found in first class condition.

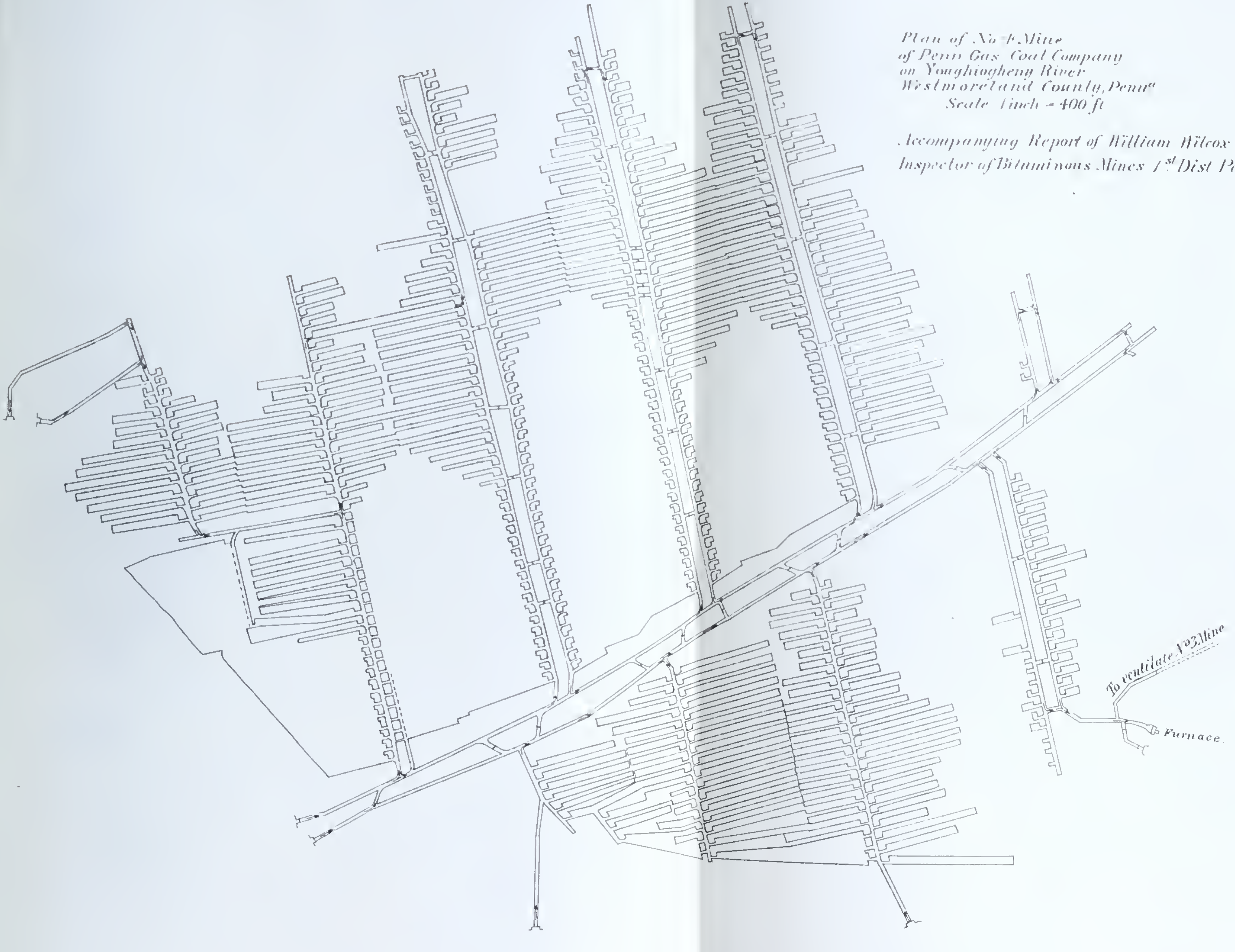
Mines No 4 is situated at the junction of the Baltimore and Ohio railroad with the Youghiogheny railroad. It is a drift opening, and the mode of working is double heading, partly. The main heading is nine hundred yards long, and discharges the water of the mine by natural gravity. The ventilating furnace is situated at the lower side of the working, a plan of which will be found accompanying this report. This furnace has a capacity of forty thousand cubic feet per minute, and is the largest and best constructed in this district. The stack is ten feet wide at the base and one hundred feet high. This mine generates large quantities of carbonic acid gas, and the idea of placing the furnace at the lower opening is a good one, as less power is required to move it down hill than would be required to move it up hill, the gas being much heavier than common air. There are five openings here, and the air is well distributed through the workings. Two hundred and seventy men and boys are employed here, and the total number of persons employed by this company in the month of December was one thousand and eleven.

The other mines of the company were not operated to any extent in 1878, but a good deal of improvement has been made at all the mines. The furnace at No. 4 was commenced in 1877, but the greater part of the work was done in 1878, when it was completed. They also built a fan-house, put up an eighteen foot fan, and sunk a shaft, and made other general improvements at No. 3, Youghiogheny shaft. Built a new engine and boiler house, put up a new engine, and built a new tipple at the Penn mines. The product of this company's mines is the largest in the district, and the last year's amounted to four hundred and seventy-two thousand seven hundred and eighty-six tons of two thousand pounds each.

The Jefferson mines, operated by Foster Clark and Wood, is in Jefferson township, Allegheny county. It is a drift, or rather two drift, openings, and employes eighty-five hands inside. The main-heading is twelve hundred yards long, and extends to the second hill workings. The

Plan of No 4 Mine
of Penn Gas Coal Company
on Youghiogheny River
Westmoreland County, Penn^{a}
Scale 1 inch = 400 ft

Accompanying Report of William Wilcox
Inspector of Bituminous Mines 1st Dist Penn^{a}



old part of the mine is near worked out. The new division of the mine has a main-heading five hundred yards long, and five cross-headings, and is operated partly on the double-heading system. Extensive improvements have been made during the last year in a general way all through the mine. Ventilation and drainage has been improved by sinking a shaft and putting in a steam pump. The mine is troubled with swamps, but the owners are getting it into much better condition, other improvements are contemplated such as shortening the haulage, etc. Thomas Foster, superintendent; David Allen, mining boss.

Hiram Warne & Co., mine is in Carrol township, Washington county. It is a drift opening. Employing thirty men and two mules. It is operated with single-headings. Drained by steam pump, and ventilated by boiler, furnace, and steam exhaust from the pump; and there are four openings to day. The main-heading is six hundred yards long, and there are five cross-headings, with an average length of two hundred and fifty yards, only three of which are in operation. In driving the main-heading a swamp was encountered, eighteen feet deep, which had to be crossed at considerable expense. The ventilation and drainage is in fair condition. Joseph Burgen, mining boss.

The Abe Hays coal works is in Carrol township, Washington county. It is a drift opening. The main-heading is five hundred and fifty yards long, and there are two double-headings, three hundred yards long, two single-heading, one open to day light. The grade in all the headings very even, which helps the haulage, and there is a good roof. The water is discharged by the natural gravity of the mine. Ventilation is due to the furnace and shaft located at the upper end of the working. It is badly located for the present working, and entirely inadequate to the proper ventilation of the mine. The superintendent informed me that they intended to build a new and much better one shortly. Thomas S. Hutchinson, superintendent; William McMarten, mining boss.

The Shire Oaks mine, operated by Blackburn & Mort, is in Union township, Washington county. It is a drift opening on the face of the coal. There are four openings, and employs about seventy men inside. The main-heading is four hundred and twenty yards long, and there are five cross-headings, with an average length of two hundred and sevety-five yards. Two of these headings have separate openings or air-courses. In some of the headings the air-current was rather weak, the air courses contracted some by falls of slate, etc., which it was suggested be removed. Ventilation is due to a small furnace near one of the openings, but which is very limited in size and capacity. After a talk with the operators, who expressed a willingness to do whatever the law required, it was agreed to build a large furnace and locate it at a deeper opening. The mine has a capacity of nine thousand bushels per day. James Mort, superintendent; Richard Parks, mining boss.

Gamble & Risher have opened a new mine in Union township, Washington county, and have erected a river tipple, incline plane, check-house, etc., and have about fifteen men at work in the mine. It is expected that this will be a good mine, as there are upwards of three hundred acres of coal in the field.

The mines of Horner & Roberts, located at Elizabeth, Allegheny county, is a drift opening, operated on the double-heading system, and ventilated by a powerful furnace and brick stack one hundred feet high, drainage being effected by steam pump at the bottom of the swamp. There is a shaft opening and two drift openings. The air enters the mine at the lower opening, and a short distance from the pit-mouth is divided, one half going to ventilate the lower working, the other going to the upper part of the mine. At the upper end of the working is a line air-course running to the furnace, and which serves as return for the whole of the mine. The air is coursed around the face of all the headings and cross-headings, by means of doors and stoppings, and is then returned by way of the upper air-way to the outlet. Both carbureted hydrogen and carbonic acid gasses are generated, but the ventilation here is very good. The gas is very troublesome in the roof, causing heavy falls of slate, etc. The hauling roads are laid with iron, and are dry and in excellent condition. An air measurement at the outlet showed that there was circulated the working two thousand seven hundred and fifty cubic feet per minute, and one hundred and eighty men and boys are employed here and seventeen mules. Samuel Roberts, superintendent; Thomas Burtoft, mining boss.

Richard Stockdale's mine is located in Carrol township, Washington county. The main-heading is five hundred and fifty yards long, with five cross-headings and an average length of three hundred yards; there are three openings for drainage and ventilation. The lower workings are connected with the old workings of the Harlem mine; and considerable carbonic acid gas is evolved from these old works. The drainage is imperfect owning to the many rolls and swamps, but is being very much improved by driving water courses and cutting drains. The ventilation is being improved by erecting a ventilating furnace building doors and stoppings. Fifty-seven men and three mules are employed here; the mine has a capacity of five thousand bushels per day. George Thomas, mining boss.

The Corondolet mine, operated by Frazer & Frye, is situated in Washington township, Fayette county. It is a drift. The main-heading is open through the hill. Has one face-heading and three short cross-headings nearly worked out. Near the face of the upper heading is an opening which supplies ventilation.

The new opening is a drift. The main-heading is three hundred yards long, and there are three cross-headings, one of which leads to shaft for ventilation, and where the owners will build a furnace. Both were found to be in fair condition. The capacity of the mine is four thousand bushels per day. John Wehod, mining boss.

Jones Road, operated by G. & W. Jones, located in Jefferson township, Allegheny county, is a drift opening. The main-heading is eight hundred yards long, and there are eight cross-headings, two of these headings connect with Walton's upper road. In the first two headings the air was good, there being a good air current circulating past all the men's working places; but in two of the lower headings the ventilation was not satisfactory, and Mr. Jones promised to have it put right immediately, and it is contemplated by the owners to apply artificial ventilation. The drainage and general condition of the mine is very good. There are six openings, and one hundred and ten men and eleven mules are employed. It has a capacity of ten thousand bushels per day. John Balph, mining boss.

The Union coal works, operated by Jacob Tomer, is situated in Rostraver township, Westmoreland county. It is a drift opening. Worked partly on the double-heading system. Ventilation is effected by shaft. Fire at foot of it, which the owner is replacing with a good furnace. The mine was carefully examined and both drainage and ventilation found in fair condition. In developing this field, a swamp was met with where the coal pitched on an angle of twenty degrees. A steam engine is employed to haul the coal. Drainage is effected by natural gravity. Forty-eight men are employed here. John Gillingham, mining boss.

The Enterprise mine, O'Neill & Co., is located in Jefferson township, Allegheny county. It is a drift opening. The main heading is fourteen hundred yards long, and through the the third hill. No. 9 cross-headings, is eleven hundred and fifty yards long, and open through to day. From this heading there is a face heading three hundred yards long, and through to daylight, and has four cross headings, with an average length of four hundred yards. Besides the above, there are six other cross-headings. All these headings are single, connected by air ways, and several of them are out to day. The ventilation and drainage are by natural forces, and in fair condition. The general condition of the mine has been much improved the last year by erecting doors, and stopping and driving air ways, etc.; and there are nine openings to the mine, two of them being made during the year 1878. There are employed here, in all, one hundred and sixty men, and twenty-three mules. In the month of December one hundred and seventy-seven thousand one hundred and sixty-one bushels of lump coal was mined and shipped to market. John Todoff mining boss.

The mines of Joseph Watson & Co. are three in number—the Beck's Run mine, and Walton's Upper and Lower Roads.

The Beck's Run mine is in Baldwin township, Allegheny county. In consists of a number of drift openings. The main heading is double, opened through the hill, with ten cross-headings. There are eight openings, ventilated and drained by natural forces. A number of the cross-headings connect with an air course, which is the dividing line with H. B. Hays & Brother and Beck's Run mine. The fire that occurred here in November, 1877, was put out in January, and the mine recovered in good condition. It was found no great amount of damage had been done. About one hundred and fifty men are employed here, the mine having a a capacity of twelve thousand bushels per day.

The Lower Road mine is in Jefferson township, Allegheny county. Is a drift opening. Is worked on the block system, and ventilated by natural forces. The main-heading is eleven hundred yards long, and connects with the upper mines. Fifty yards from the pit mouth, there is a face heading, from which the cross-headings are driven. These cross-headings are six in number, with an average length of six hundred yards, all connecting with the air course at the head. There are eight openings to day, and a fair current of air was found on all the headings. There is a good roof, and the coal seam lies very level. The hauling roads are laid with iron, well drained, and in excellent condition, the miners are well supplied with timber in their working places. This mine employs one hundred and eighty men, and has a capacity of fourteen thousand bushels per day. The mines are in charge of John Rife.

Joseph Walton & Co., upper road, is in Jefferson township, Allegheny county, and consists of a drift opening. It is worked partly on the double-heading system, and ventilated by natural means. There are eight openings, and it employs one hundred and fifty men and boys. It is connected on one side with the lower pit, and on the other side with that of the Jones Brothers. This mine has been much improved, in a general way, both as to drainage and ventilation, during the last year. The general workings, roads, &c., are in very good order, and the ventilation may be classed as fair. William Young, mining boss; Samuel Adams, superintendent.

The Nilesville mine, Robbins, Linn & Co., is situated at Nilesville, Allegheny county. It is a drift opening. The main-headings are twelve hundred yards long, with five cross-headings of an average length of three hundred yards. The coal seam is here five feet thick, and of excellent quality. The waters of the mine are discharged by natural gravity. The hauling roads are laid with iron, and are in good order. The ventilation has been improved in the last year by sinking a shaft and erecting a furnace of a capacity of thirty thousand cubic feet of air per minute, which is ample for the mine. The plan adopted here, is single-heading one hundred yards apart, with air ways every one hundred and eighty yards. It has a capacity of eight thousand bushels per day, and gives employment to about seventy-five hands. R. M. Smith, superintendent.

The Clipper mine is situated at Allenport, Washington county, and is owned and operated by George W. Clark, of Bellevernon. It is a drift opening. Is worked with double-headings, and ventilated by furnace and brick stack. The main-heading is eight hundred yards long, and has four cross-headings one hundred and sixty yards apart. The system of ventilation and drainage is good, and the mine is in good condition. Fifty-five men are employed here.

The Tremont mines, owned and operated by George W. Clark, is in Washington township, Fayette county. It is a drift opening, operated with double-headings, drained by natural gravity, and ventilated by furnace and brick stack. The furnace is too small and badly located, and owing to the reckless manner of mining, the air courses to the furnace are in an unsafe condition. Mr. Clark, the owner, has concluded to sink an air shaft, which, when completed, will render it one of the best mines on the Monongahela river. There is a good roof. The roads are dry and in good order, but the ventilation will remain defective until the shaft is completed. John Leonard, mining boss.

The Rostraver coal works, owned and operated by William J. Clark, is a drift opening, situated in Rostraver township, Westmoreland county. It is worked partly with double-heading. Drainage is effected by natural gravity. Ventilation partly by natural currents, and partly by a small furnace, which is being re-placed by a large one, a good shaft having been sunk for that purpose. Mine consists of main-heading and three cross-headings, has a capacity of eight thousand bushels per day, and employs seventy men. There are five openings, all in good condition. David R. Jones, mining boss; A. Rupert, superintendent.

The mines of Turnbull & Hall are situated in Jefferson township, Fayette county. It is a drift opening, employs seventy men and four mules, and has a capacity of seven thousand bushels per day. It has been in operation eight years, and a good business has been done. It is worked on the single-heading system, drained by a syphon pump, ventilation being assisted by a small furnace located at one of the openings. Ventilation has been improved by building a brick stack, and is being further improved by erecting a much larger furnace.

The Excelsior mine, operated by Daniel Bortner & Co., is a drift opening, situated in Jefferson township, Fayette county. This is a small mine employing twenty-two men, with a capacity of three thousand bushels per day. It consists of main-heading and three cross-headings, one of them open to day. The air-courses between the cross-headings are in bad condition, and powder smoke is very troublesome, owing to imperfect ventilation. There is an old furnace, too small to be of any practical use, located among the old workings. When spoken to about it, the company claimed there was nothing in the business of mining and shipping coal, and it would pay them better to quit the business altogether than to go into the expense of ventilating the mine.

The Allequippa mine, Whigham & Bailey operators, is situated in Mifflin township, Allegheny county. It is a drift opening, operated on the single-heading system, and ventilated partly by natural currents, and partly by a small furnace. The workings are rather large, and are naturally divided into upper and lower workings. The lower workings are nearly exhausted, and will shortly be abandoned. This lower part embraces the greater part of three cross-headings, and is ventilated by a small furnace at the lower end of the working. Besides being small, it is badly constructed, and not of sufficient capacity to move the required amount of air to ventilate this part of the mine.

The upper workings are new, and are being opened extensively. The main-heading is open through the hill to day. Near one of the cross-headings the mine has been much improved by sinking a good shaft, where it is the intention of the owners to build a ventilating furnace. The workings are well laid out, and in good order, and the hauling roads are laid with iron. Large quantities of carbonic acid gas, black damp, are evolved from the old workings, which requires good ventilation to render it harmless. One hundred and twenty men are employed here. George Wood, mining boss.

Crows mine, operated by George Jolliff, is a drift opening, located in Allen township, Washington county. It is worked on the double-heading system, and ventilated by furnace and brick stack. The main-headings are nine hundred yards long, with four cross-headings of one hundred and fifty yards each. It employs forty-five men and three mules. There was a fair amount of air in circulation in all the headings, and the mine, generally, is in good order. It has a capacity of seven thousand bushels per day. Superintendent and mining boss, James B Montgomery.

The Gregg mine, situated in East Pike Run township, Washington county, is a drift opening, owned and operated by Crowthers, Musgrave & Co., and employs sixty men. Besides the main-heading, there are six cross-headings. It is ventilated by the natural currents; but has not been very satisfactory, and the owners are improving it by building a furnace, a shaft having been sunk for that purpose. There is a little trouble with the roof blowing down in some parts of the mine. The hauling roads are laid with iron, and in fair condition. Andrew Parks, mining boss.

The American mines, located at Wood's Run, Washington county. It is a drift opening, and is operated by Bell, Williams & Co. The main-headings on the face are five hundred yards long, and are double-headings; and there are three cross-headings in operation, of an average length of two hundred and fifty yards. The air is circulated to the face of the cross-heading. Ventilation is effected by shaft and small furnace. Both ventilation and drainage are in fair condition. Twenty-two men are employed. The coal seam is over eight feet thick, and requires blasting, three or four hundred bushels being thrown down at one blast. William Williams, superintendent; Robert Bell, mining boss.

The Wood's Run mine, operated by Thomas J. Woods, is in Allen township, Washington county. It is a drift opening. The system adopted here is double-heading; room twenty-five feet wide, pillars ten feet, which are left in the mine. Drainage is by natural gravity of the mine, and ventilation is due to a small furnace and shaft. The main-heading is five hundred yards long, and with two double cross-headings. At the face of the cross-heading there were three thousand and sixty feet of air in circulation, and at the outlet nine thousand three hundred and thirteen feet per minute. There are fifty-four men employed here, and the mine has a capacity of eight thousand bushels per day. Thomas J. Woods, superintendent; Ezra Conway, mining boss.

The business of manufacturing coke was commenced in 1842, by Sample and James Cochran, who are still in the business. They built the first two ovens. The coke being shipped on a flat boat, and run down the Youghiogheny river. The first cargo consisted of six thousand bushels. This coke arrived safe at Cincinnati. And from that time it has steadily increased, until it has reached its present enormous proportions.

The following is a list of persons engaged in the manufacture of coke, and the number of ovens operated by each company:

H. C. Frick & Co., eight mines,	624	
Strickler & Lane,	44	
Markle, Sherrick & Co.,	80	
A. A. Hutchinson,	79	
James Cochran & Co.,	100	
M. Sherrick,	21	
Everson, Macrum & Co.,	51	
Fox, Kiffer & Co.,	13	
Henderson & Co.,	50	
J. R. Stauffer,	35	
Samuel White,	70	
Staufft,	30	
A. H. Overholt,	64	
Markle & Co.,	70	
J. R. Overholt,	30	
John M. Cochran,	60	
Stauffer,	18	
Mr. Mullens,	60	
Boyle & Hazlett,	182	
Connellsville Gas Coal Company,	99	
Reid Brothers,	76	
Mahoning Coke Company, limited,	90	
Cochran & Kester,	100	
Brown & Cochran, three pits,	439	
Jackson Mines Company,	64	
Laughlin & Co.,	140	
Pittsburgh and Connettsville Gas Coal and Coke Company,	253	
Dunbar Furnace Company,	89	
Ewing, Hanna & Co.,	127	
Mr. Frost,	18	
Calvin & Torrence,	101	
Zuck & Henry,	40	
A. H. Sherrick,	70	
Dillinger & Suttle,	41	
Hurst, Stoner & Co.,	70	
Samuel Warden & Co.,	18	
Southwest Coal Company,	16	
Greesburg Coal Company,	10	
Total number of ovens,		3,442
On the Pennsylvania Railroad, and West Pennsylvania Railroad, there are at Carnegie Brothers,		160
Loyal Hanna mines,		100
Isabella Furnace Company,		200
Making in the aggregate,		3,902

These are nearly all in active operation. To charge these ovens every 48 hours, the one half being charged each day with 100 bushels of coal each, requires 195,100 bushels of coal, and the product would be 241,924 bushels of coke daily; allowing three ovens to each man, requires 650 coke drawers to remove it from the oven and load it into cars for shipment; and allowing 400 bushels to each car load, would require 604 railroad cars daily to take it to market. Besides the above, Beall & Ewing have 60 ovens in operation near New Geneva, on the Monongahela river. This coke is all produced in the counties of Fayette and Westmoreland. The demand for coke is good, and increasing.

The coal shipments from the Monongahela and Youghiogheny rivers to the lower markets during the last year were larger than any previous years, except 1877. This amounted to 65,697,000 bushels, and, in 1877, to 66,936,000 bushels. For the ten years previous, the average annual amount shipped was 54,000,000 bushels. Coal was shipped every month in the year, except July. The largest shipments were made in January, when they amounted to 13,343,000 bushels. Of the coal sent out 38,068,000 went to Louisville, 25,176,000 to Cincinnati, 1,003,000 to St. Louis, and the balance, in much smaller amounts, to other places.

The Pine Run mines, operated by James Lynn & Co., are two in number; the old and new; both are in Jefferson township, Allegheny county. county. The old mine is a drift opening, operated on the system of double-heading, and ventilated by a shaft and furnace. The main-heading is nine hundred yards long, and there are three double cross heading. Near the face of the main heading, the pump is located for draining the mine. The furnace has a capacity of ten thousand cubic feet of air per minute. Forty-five men are employed here.

The new mine is near the old one. The main-heading is through the first hill, which is nearly exhausted of its coal, and six men are at work removing pillars, etc. The new mine consists of double main-heading, five hundred yards long, with double face-heading two hundred yards long. This part of the mine is being largely developed, between fifty and sixty men are at work, and the plan adopted is very good. On the left hand side of the main-heading, and fifty feet from it, a shaft was sunk, and a ventilating furnace built, capable of producing thirty-five thousand cubic feet of air per minute, which will be ample to ventilate the whole coal field now being opened up. Both of these mines are in the best condition, and everything is being done that the law requires. John O'Neil, superintendent; James O'Neil, mining boss.

The mines operated by the Harlem Coal Company are three in number—the Catsbird, Harlem, and the Rea mine. The Catsbird is located at Monongahela City, Washington county. It consists of a main-heading and three cross-headings, and is worked on the block system. There are six openings, two of the cross-headings being open to day. A system of drainage has been perfected, the siphon and steam pump having been dispensed with. The ventilation has not been satisfactory; but Mr. Staib has succeeded in putting it in good order by opening up an old shaft, and getting a furnace to work, when a fire, which had been burning a number of years, but was thought to be securely fenced off, broke out again, and mining operations were suspended, and an attempt made to once more confine it to the old working by building bulk-heads, etc.

The Harlem mine is in Carrol township, Washington county, is a drift opened through a hill, and has three cross-headings. Is ventilated by shaft and large fire basket. There are thirty-three men employed here. The mine is well drained, and the ventilation is in fair condition. Louis Staib, superintendent; William Brooks, mining boss.

The Rea mine is located near the line of the counties of Allegheny and

Westmoreland, is a drift opening, operated by the Harlem Coal Company, and ventilated by natural currents. Employs thirty-six men and two mules. It consists of two headings and an air-course. The system of mining is single-heading, room nine yards wide, with hauling road in the middle, and five feet pillars between each room, which are left in the mine. This system is carried on until fifteen or twenty acres of ground is gone over, when a squees takes place, which cleans out all before it, and the heading must be abandoned. This is partly due to the system of mining, and partly to the nature of the floor of the mine. The hauling roads were found dry and in fair condition. The ventilation may be classed as fair. John Crombie, mining boss.

The White Heath mine, near the junction of the Baltimore and Ohio railroad with the Youghiogheny railroad, has been put in operation by F. J. Anspeck. It is a drift opening, and has been idle the last two or three years. It consists of main heading, eight hundred yards long, and four cross-headings, one hundred and twenty yards apart. Three of these are driven out to day. At the time of my visit there were a few men at work mining coal and cleaning up—putting things in order for mining. Levi Strauser, mining boss.

C. P. Markle & Sons' mine is on the Baltimore and Ohio railrood, just below Sewickly Junction. It is a drift opening. The coal seam is reached by a short incline plane. The seam is five feet thick. Mine consists of main-heading and one cross-heading, with an air-course leading to day. There are sixteen men employed here and one mule. Ventilation is effected by the natural forces. Drainage by siphon. The mining boss is Dan. Burkart.

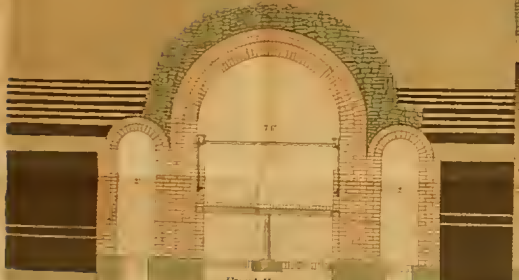
The Black Ball mine has been idle a number of years, but has recently been put into operation by Robert H. Powell, with F. J. Anspeck, superintendent, and Levi Strauser, as mining boss. It consists of two drift openings, both used as hauling roads, and four cross-headings one hundred and twenty-five yards apart. Since operations began, a narrow air-course has been opened through to day. Forty-five men were at work chiefly turning rooms. The company contemplate erecting a furnace for ventilation. Drainage is effected by natural gravity.

The Jacobs' creek mine, operated by Fox, Kiffer & Co., is located near the mouth of Jacobs' creek, in Westmoreland county. Employs nineteen men. The mine consists of main-heading and three cross-headings. These headings are open to an air-course running back to a shaft for ventilation, where it is the intention of the company to build a furnace.

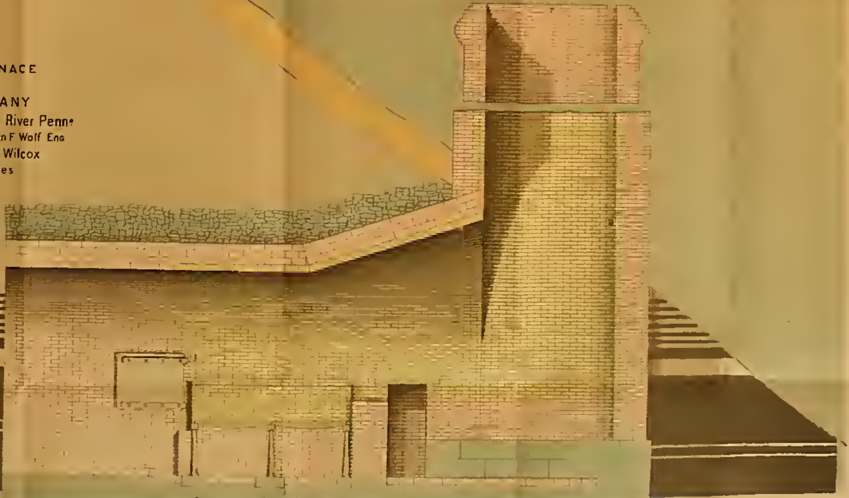
William C. Guffy's mine is located at Webster. He has only five men at work, and the mine was not examined. He is opening up a new coal field.

The mine owned and operated by John Gilmore, at Webster, Westmoreland county, is a drift opening. The main-headings are double on the end of the coal, eight hundred and fifty yards long, and through the hill to daylight. There are four cross headings. This mine is worked on the block system. The cross-headings are one hundred and fifty yards apart, with face-headings or air courses every one hundred and fifty yards. In the center of the hill, there is a swamp, which was formerly drained by a siphon; but during the last summer a system of drainage was perfected. There are five openings here. I wrote to Mr. Gilmore, informing him of the condition of the ventilation, and the requirements of the law, and his answer was, that as soon as the weather was fit he would commence operation on shaft for the furnace. This is a good mine, and should be properly ventilated. G. W. Gilmore, superintendent; John C. White, mining boss.

PLAN
OF VENTILATING FURNACE
CONSTRUCTED BY THE
PENN GAS COAL COMPANY
At their Mine No. 4 on the Youghiogheny River Penn^a
Scale 1 inch-3 ft.
John F Wolf Eng
Accompanying Report of William Wilcox
Inspector of Bituminous Mines
1^st Dist Penn^a.



Front View



Longitudinal Section

The William Hodgeson is just above Webster, Westmoreland county, and is operated by Lynch & Robinson. On my first visit there, I found the ventilation in a most miserable condition. There was not sufficient air in motion anywhere in the mine to move the anemometer, and the atmosphere was loaded with powder smoke—and other impurities of the mine. There was a small furnace, about the size of a good sized bake-oven, located at the outcrop, and immediately among the old workings; and in trying to find my way across the old workings, along with the pit boss, we met the smoke from the furnace, the natural draft had overcome the power of the furnace, and we were compelled to retrace our steps, and approach the object from the outside, which we did. Of course, Lynch & Robinson were not to blame for this state of affairs, as they had only just leased the mine, and as soon as they were made acquainted with its true condition they were very anxious to have it remedied, which they did by building a very good furnace in a new location, the mine is now well ventilated. The furnace produces fifteen or twenty thousand cubic feet of air per minute, which is circulated through all the headings in three splits. Thomas Briggs is mining boss.

The Iron City mine, two miles south of Webster, Westmoreland county, is operated by Phillips & Mettenzway, it is a drift opening, and employs about sixty men. It is worked partly on the double-heading system, and ventilated by a good furnace and shaft. It consists of double main-heading and five single cross-headings, these latter are one hundred and fifty yards apart, with face heading every one hundred and fifty yards, thus leaving the coal in squares of one hundred and fifty yards each. The roads are well maintained, but the hauling is difficult on account of the heavy grade to haul against. Until last summer ventilation was produced by a small furnace located behind the hill, and surrounded by old workings through which the air was compelled to travel in its course to the outlet. A furnace constructed on such a plan and in such position could not be effective, and after consulting with the owners they concluded to build a new one which was immediately done. The mine is now well ventilated.

At the lower end of the main-headings, on the dip of the workin s, the shaft and pump is located for drainage purposes. Jacob Mank, superintendent; Solomon Stroup, mining boss.

The mine of J. S. Neel is located at Greenfield, Washington county, it is a drift opening. Worked on the single-heading system partly and partly double-heading. It consists of double main-heading and three cross-headings. The cross-headings are one hundred and fifty yards apart, with fifty feet pillar between the main-headings. The plan of working here is room nine yards wide with pillar twelve feet. The whole thickness of the coal seam nine feet is wrought, but the pillars are left in the mine, and like all other mines, where this system is adopted, they have had some trouble with the squees which injured the mine. The workings are well and regularly laid out. The hauling roads are all iron, and the drainage by natural gravity is good. The ventilation has been very unsatisfactory and defective. A great deal of blasting powder is used, and the smoke filled the mine with noxious gases. I wrote to Mr. Neel, calling his attention to the state of his mine, and he replied by stating that he would improve it immediately. He has opened a good shaft and erected a ventilating furnace, which, I have no doubt, will render the ventilation beyond complaint. P. J. Forsythe, mining boss.

Morgan & Dixion's mine is situated on the Monongahela river, in Jefferson township, Fayette county. It consists of a drift opening, with main-heading; and four cross-headings. The cross-headings are eighty yards apart, and are single, with air courses about every one hundred yards. The drainage, by natural gravity, is good; but the ventilation has been much neglected. Carbonic acid gas, black damp, is generated, which requires large volumes of air to render harmless. Ventilation has been somewhat improved by building a small ventilating furnace. Small as it is, it is badly constructed, and has once set fire to the mine, but was put out before much damage was done. The workings are well laid out, and with proper attention to ventilation, etc., it would be a good mine. Eighty-five men and three mules are employed here. Superintendent, M. Morgan; mining boss, James Young.

The Merchant mine is just below the Little Alps, in Jefferson township, Fayette county. It is a drift, and consists of two short-headings, one of which is connected with the Little Alps mine. There were eighteen men at work here, and sixteen hundred and sixty-eight cubic feet of air per minute in circulation. The coal is nearly exhausted, and it will be closed shortly. The firm operating it is Coatsworth & Underwood.

The Little Alps mine, located in Jefferson township, Fayette county, is operated by Crowthers, Musgrave & Co. This is a drift opening. The main-heading, eight hundred and twenty yards long, was formerly through the hill to day, but the past year it has been closed by removing some of the pillars at the interior end of the workings. There are five cross-headings, one of which is connected with the Merchant mine. A shaft has been opened at the face of another one, and a small furnace built to assist ventilation. This furnace is too small, only having a capacity of four thousand feet per minute, and the company contemplate erecting a larger one in the spring of next year. Drainage is effected by natural gravity. The hauling roads are iron, and in fair condition. The coal seam is nine feet thick, with good roof. Only five and a half feet of the upper part of the seam is mined. The lower part being of an inferior quality. Jones Crowthers, superintendent; Joseph Good, mining boss.

The Joe Garrow is just above the Little Alps, on the same side of the Monongahela river, and is operated by Joseph Garrow. It is a small mine, having but a one heading, and employs about eighteen men. A small hole has been opened at the face of one of the rooms for ventilation. I suggested the use of a small furnace to assist the natural draft.

The Oak Ridge mine is operated by the Oak Ridge Coal Company, limited, is located in South Fayette township, is a drift opening, and worked on the system of single-headings, with room twenty-one feet and pillar twelve feet wide. Rooms are turned sixty-six feet apart, driven twenty-one feet, when a second room is turned, leaving a block of coal sixty feet long by twenty-one feet wide to support the heading. The main-heading is open through the hill to day, and there are four cross-headings. During the past year the mine has been greatly improved, and the haulage shortened by making a new heading partly through the old workings. A good iron track has beed laid, and a good grade secured. Ventilation has been greatly improved by sinking a shaft in the center of the coal field, and erecting a good ventilating furnace at the foot of it. This furnace has a capacity of twenty-five thousand cubic feet per minute, and is powerful enough to ventilate the balance of the coal field. The air is conducted to the face of all the headings. The mine is in a very satisfactory condition, and the men are well supplied with timber. George W. Schluderberg, superintendent; Charles Wilhelm, mining boss.

The National mines, operated by the Consolidated Gas Coal Company, is at Noblestown, Allegheny county, is a drift opening, worked on the single-heading system, and ventilated by shaft and furnace under boiler, and by steam exhaust from pump. Carbureted hydrogen and carbonic acid gas are generated. The shaft has been sunk the last year, with the double object in view of proper ventilation and drainage, but the means adopted are insufficient to the end in view. In the older part of the working there is an old furnace, out of use, and I suggested to Mr. Fisher, superintendent, that it be moved to the foot of the pumping shaft to assist in ventilating the mine, which he promised to do. At the main inlet I found a volume of four thousand two hundred and ninety feet, and at the outlet there was six thousand five hundred and ninety feet per minute. The number of men employed was, inside, ninety-five and nine mules. There are three openings. The hauling roads are partly iron and partly wood, and are in good order. The mine has a capacity of nine thousand bushels per day. Edward Fisher, superintendent; John D. O'Neill, mining boss.

The mines of Boyle & Hazlett are two in number, the Upper and Lower Slope. Are situated one mile south of Mt. Pleasant, Westmoreland county. The Upper Slope consists of a main-heading, and three cross-headings. Ventilation is effected by shaft and small furnace. Drainage is effected by steam pump at the dip end of the workings. This mine generates a great amount of carbonic acid gas, (black damp,) and requires a larger volume of air to dilute it than is produced by the present furnace. There are three openings, and thirty-five men are employed inside, and thirty-four men outside as coke drawers.

The Lower Slope is just below, on the opposite side of the railroad, and has two openings. It has connections with the Stauffer mine. The greater part of the workings has been abandoned, and a new commencement made at the foot of the slope. The present working consists of two headings, connected by a system of rooms, and what circulation exists is allowed to diffuse itself through the workings, without the assistance of doors or stoppings to direct it. The system adopted here is, after the room is finished to gut the pillars, leaving blocks of eight or ten feet square to support the roof. Drainage is effected by steam pump. James Devlin, mining boss.

The Union coke works, Hurst, Stoner & Co., operators, is located in East Huntingdon township, Westmoreland county. It is a drift opening, and employs twenty-two men inside, and four mules and twenty-four men outside. It consists of main-heading, and three cross-headings, one hundred yards apart. Ventilation has been much improved by sinking a shaft fifty feet deep, where the mine is relieved of water by a steam pump. It is the intention of the owners to build a ventilation furnace at no distant day. The mine is in fair condition. Braden Hurst, superintendent.

The Everson mines, operated by Everson, Macrum & Co., are located Tyrone township, Fayette county. It is a drift opening, and employs thirty-four men. It is worked on the single-heading syetem, and ventilated by natural forces. There are three cross-headings, and an air and water course to day. Carbonic acid gas is generated, and requires artificial ventilation. The workings are well laid out, and the hauling roads and drainage are in good order. It has a capacity of six thousand bushels per day. John A. Usher is mining boss.

The Buckeye mine, operated by John M. Cochran, and located at Stauffer's station, Westmoreland county, is a drift opened on the end of the coal, and is ventilated by the natural forces. Mine consists of main-heading and two cross-headings. There is also a heading leading to the second opening at the upper end of the mine. My examination was made after the men had quit work for the day, and there was very little moving current in any of the headings, but there were but little noxious gases present.

In corresponding with Mr. Cochran, I suggested that he erect a furnace at the mouth of the highest opening. About forty-four hands are employed here. Frank Cochran, mining boss.

Mullen's mine is located one mile below Mount Pleasant, Westmoreland county. This is a short slope opening, and has main-headings and three cross-headings, and two shafts and ventilating furnace. At the upper end of the workings, by the use of one door and a few stoppings, this furnace provides all the air required. The mine generated some carbonic acid gas, but it is well ventilated and rendered harmless. John Bell, mining boss.

The Overton mines, located two miles north of Scottdale, Westmoreland county, is a drift, and is operated by A. S. R. Overholt. It consists of but two headings, one hundred and sixty yards apart. There are four openings, two drifts, and two small shafts. The shaft at the face of the main-heading was sunk last summer for the purpose of improving the ventilation. It had the desired effect. If anything more is needed, a furnace will be built. There are twenty-two men employed inside, and eighteen outside. F. M. McClain has charge of the mine.

The Rising Sun mine is located in East Huntingdon township, Westmoreland county. Is a drift opening, and is operated by Markle & Co. It consists of main-heading, two cross-headings, single. The system adopted here is room fourteen feet wide, and pillar eight feet, which is not removed. The hauling roads and drainage are in fair condition, and the ventilation has been much improved by opening a shaft at the face of the main-heading, and building a number of stoppings. The practice of having men working beyond the air, I found in use here; but, at my suggestion, the mining boss promised to remove them into purer air. Mr. Markle, superintendent; Adam Whitehead, mining boss.

The Dexter mine, operated by J. R. Stauffer, is located in Tyrone township, Fayette county. Is a drift opening. The mine consists of two headings, on the end of the coal, and is connected with the Painter mine. There is also a small shaft on the right hand side of the main-heading. This mine employs but twelve men inside. On both of my visits, I found the ventilation and drainage very good, and the hauling roads in good condition. The superintendent is S. R. Fairchild.

The Painter mine joins the last one, on the same side of the Mount Pleasant road. Is a drift, and is operated by Samuel White, and is a much larger than the Stauffer mine. The main-heading is five hundred yards long, and there are five cross-headings, all single. The drainage is good. Ventilation mainly through the Stauffer mine, by natural forces. At my former visit, this mine (as to ventilation) was in miserable condition. A second visit found it much improved, by widening air courses and erecting stoppings, etc. This mine requires artificial ventilation, it is too large to be ventilated by natural means. I suggested to Mr. White that a furnace be built to secure proper ventilation. Sixty men are employed, inside and outside. Samuel White superintendent; John Garns, mining boss.

The Pennsville mine is situated on the South-west Pennsylvania railroad, in Fayette county, and is owned and operated by A. H. Sherrick. It consists of a drift and a shaft for ventilation, which is affected by a ventilating furnace at the foot of the shaft. Besides the main-heading, there is a water or swamp-heading running to the dip of the working; and where the pump is located for draining the mine of water, this heading is used by the miners for ingress and egress. A small locomotive engine is in use for hauling the coal from the inside parting to the tipple. The smoke from this is a little troublesome, but need not be if attention is paid to the details in ventilation. The shaft and furnace were built for the purpose of obviating this, and if it fails, it is the fault of the parties in charge of the mine.

There are but two cross-headings from which rooms are worked. The roads are laid with iron, and in fair condition. There are twenty men employed inside and fourteen outside. An air measurement showed six thousand nine hundred cubic feet at the outlet, and four thousand four hundred and ten feet at the inlet; but this was not as well distributed as it should be. I made some suggestions to the mining boss, which if carried out, will remedy it.

The summit mines, operated by James Cochran & Co., are on the Mount Pleasant Branch, in Fayette county. They consist of two drift openings, one acting as the inlet, the other the outlet, and is ventilated by shaft and furnace, and is the best ventilated mine in the coke region. A test of the ventilation was made at the outlet, which showed a volume of eleven thousand one hundred and twenty-four feet per minute in circulation. The greater part of this is carried to the face of the working, by a system of stoppings and doors. The system of mining, is room and pillar. The workings are well laid out, with air courses at regular distances. The hauling roads are iron, and in good order. The superintendent is P. G. Cochran; Samuel Barnam, mining boss.

The Globe mine, operated by A. A. Hutchinson, is located on the Mount Pleasant Branch, in Fayette county, and consists of two drifts two hundred yards apart. Both are used as hauling roads. Between these main-headings, air courses are driven every one hundred yards. Rooms are worked twelve feet wide, with pillar ten feet, which is removed as the rooms are finished. Little timber is used except in removing pillars.

The ventilation was found unsatisfactory, and the owners have under consideration the erection of a furnace to improve it. A number of new coke ovens, of an improved pattern, have been erected here. Superintendent, Charles Cunningham; Robert Cowan, mining boss.

The mines of Sherrick & Co., are two in number. The Eagle mine, and the Strickler mine. Both are drift openings. The inside workings are connected by an air course, and ventilated as one mine. They are located on the Mount Pleasant Branch, in Fayette county. The Strickler mine is worked on the double-heading system, and besides the main-headings, six hundred yards long, there are four cross-headings. Rooms are fourteen feet, and pillars eight feet wide. A fair current of air was found circulated all through the workings.

The Eagle mine has a main-heading, and three cross-headings, and inside and out, gives employment to forty hands. The drainage of both these mines is very good, and the ventilation has been much improved the last year, by sinking a shaft ninety-nine feet deep at the upper end of the workings. The mine has an excellent roof. About one foot of coal is left over head, which assists the timber in supporting it. In both of these mines the hauling roads are laid with iron, and are in good order. J. A. Strickler, is superintendent; Alexander Devenport, mining boss.

Tyrone mine is on the Pittsburgh, Washington, and Baltimore railway, in Fayette county, and is operated by Laughlin & Co. It is a drift opened in the large Connellsville seam, and consists of a main-heading and four cross-headings, all single. The headings are seven feet high and nine feet wide. Besides the main-heading, there is an air-course running to daylight. A second visit here found the ventilation very much improved. An air-course had been driven, which connects it with the workings of the Sterling mines of Brown & Cochran, and although there is nothing but the natural draft, the mining boss appears to be taking advantage of the forces at his command by erecting doors and stoppings to conduct the air to the face of the headings. Rooms are turned from the cross-headings, and are driven twelve feet wide and run a distance of two hundred and twenty-five feet, then the pillar of eight feet is removed. Thirty-one men and three mules are employed inside, and twenty-three hands outside. Superintendent, R. P. Douglass; mining boss, Albert Herrington.

The Keystone mines are on the Salisbury branch, three miles south of Myersdale, in Somerset county, and are operated by the Keystone Coal Company. This is also a drift opening, or rather a number of drifts. It is worked on the single-heading system, room and pillar, and ventilated by natural means, and gives employment to about eighty hands, and has a capacity of five hundred tons per day, but the last year has not been operated to its full capacity. Besides the two main-openings, there are three other openings. The ventilation and drainage has not been very satisfactory, but efforts are making to improve both. During the last year two new pit mouths have been opened, and a drain dug at the lower end of the workings, which, I think, will effectually drain the mine. Mr. France, the superintendent, has informed me that they are preparing to improve the ventilation by erecting a good ventilating furnace. R. Lee France, superintendent; A. L. Anderson, mining boss.

The Cumberland mine, operated by Thomas S. Williams, is a drift located just below the " Keystone." Opened in eight feet of coal. This is a small mine, employing twenty-eight men, and is nearly worked out. There are four openings, and the ventilation and drainage here is in good condition.

Shaw's mine, owned and operated by the Cumberland & Elklick Coal Company, two miles south of Myersdale, on the Salisburg branch, in Somerset county, is a drift opening, and worked on the system of single-headings, room and pillar. It consists of a main-heading, and eight cross-headings. The latter are five hundred feet apart, and turned nearly at right angles with the main-heading. Rooms are turned only on one side of the cross-headings, and are driven four hundred feet, when the pillar is removed. There is a shaft on one side of the workings that could be used for ventilation, but little or no attention is paid to it. The natural position of the mine is a good one, and the workings are well laid out; but no advantage is taken of that fact to ventilate and drain it. All the headings were carefully examined, and no moving current was found sufficient to move the anemometer, and the air was heavily charged with carbonic acid gas. No wonder the miners complain of bad air. Since my first visit, another drift opening has been made, and here a trial with the instrument was made, and a current of four thousand eight hundred feet per minute was found; but Mr. Thomas, the mining boss, had paid so little attention to the ventilation, that he was not aware that it was running in at one pit mouth and out at the other, without ever reaching the cross-headings, where the men were at work.

In many of the rooms, the water was several inches deep, and no provision made to remove it; and the hauling roads were also in very bad condition, through which the mule drivers and miners are compelled to walk.

There has also been some trouble about the furnishing of the mine timbers in the working places of the men, as directed by the fifth section of the law. When the attention of the superintendent, Mr. Chamberlain, and Mr. Thomas, the mining boss, were called to the true state of affairs, they claimed their mine did not come under the mining law, as no noxious gases are generated in the mine, and all this in face of the fact, that in many places the light burned with difficulty. Yet Mr. Thomas prides himself in being a good manager.

They are driving another air course to day, which will be of little use, except to ventilate that one heading. Had the money been spent in erecting a good ventilating furnace at the foot of the shaft, the proper ventilation of the mine would be assured.

The coal seam is eight feet thick, soft semi-bituminous, and eighty men are employed here. The mine has a capacity of four hundred tons per day.

The mines of Nacher & Roeardy, located on Six Mile run, in Broadtop township, employ but six hands, and were not examined.

Mr. Wilson, at North Point, has a few men at work prospecting for coal.

The Mount Equity mine, owned and operated by the Kimble Coal and Iron Company, at Riddelsburg, is located at the mouth of Six Mile run, Bedford county. This is a drift opened on the Cook seam, which is from three to four feet thick, of semi-bituminous coal, and, like all the coal in this region, lies in troughs or basins. Sometimes the seam is flat, at others there is a pitch of 30° or 35°. It consists of a main-heading and three cross-headings. Besides the main-heading, there is an air course with a separate opening, which connects with the workings. Rooms are driven in all directions to suit the pitch of the coal. The mine is well drained, water being discharged by natural gravity. Ventilation fair. The company is prospecting for coal on the opposite side of the run. John Mitchell is in charge of the mines.

The Conard shaft, owned and operated by R. B. Wigton, is located near the Conard drift, and the workings extend immediately under those of the Conard drift. It was opened in 1863, but the last few years has not been operated very strongly, owing chiefly to the depression in the coal trade. The seam is known as the Barnard seam. The opening consists of a shaft for hoisting, one hundred and twelve feet deep, and besides this there is an air shaft used as outlet for ventilation, and a slope for ingress and egress for the workmen. The owner contemplates, at no distant day, erecting a fan or furnace for ventilation. On my first visit to this region this mine was thoroughly examined and was found in good condition. Mr. Robert Dickinson is well acquainted with the duties of a mining boss, and one who takes a pride in studying the laws governing the ventilation of mines.

Piper's drift is just opposite the Conard shaft. Is opened in the cook seam, but has not been in operation for more than a year.

Scott's shaft, a little higher up the railroad, was full of water, and has not been operated the last year.

The Conard mine, owned and operated by R. B. Wigton, is located in Broad Top township, Bedford county. Is a drift opened in the Cook seam, and employs forty-five men. The main-heading is one thousand yards long, and there are four cross-headings. The system of working is room and pillar, with single-heading. Ventilation is effected by natural forces. There were formerly but two openings to this mine, but, at the time of my visit, a third one was being made, and, with the new air course that was then being driven, which has since been completed, has greatly improved the ventilation. I found a current of three thousand four hundred and ten feet of air in circulation. This current, though small, was conducted to the face of the heading, the doors and stopping being well secured. The coal seam is from three to five feet thick, and lays irregularly, subject to swamps, etc., and has a pitch or incline of fifteen or twenty degrees. In many places the roof is not good, but is well secured with timber. The drainage is good.

Ventilation may be classed as fair. R. B. Wigton, superintendent; Robert Dickinson, mining boss.

The Uniondale mine, operated by Reid Brothers, is on the South-west Pennsylvania road, near Dunbar, Fayette county. It is a slope opening, on a pitch of fifteen degrees. The main-heading, on the end of the coal, is between five and six hundred yards long. A short time ago, a squees came on the workings, and they had to be abandoned, and a new start made by driving the slope further, and opening up new flat-headings, where, it is hoped, a new system of mining is to commence. It has been in operation about twelve years, and about half the coal operated has been lost by bad management. The fault does not lie with the Reid Brothers, as they have only just come into possession of the mines. On November 28, 1878, a steam-boiler at the mouth of the slope exploded, which caused the death of seven men, and injured seven others. There are usualy thirty-five men employed inside, and about the same number outside. The mine has a capacity of one hundred and fifty to two hundred tons per day. Drainage is effected by a steam-pump at the foot of the slope. J. N. Reid, superintendent.

The Leechburg colliery, operated by the Leechburg Coal Company, is located near Leechburg, on the West Pennsylvania railroad, in Westmoreland county. It is a drift opening in one of the Freeport seams, and has been in operation about seven years. The coal is three and a half feet thick, of excellent quality, lies very flat, and has a good roof. The main-heading is nine hundred yards long, and there are eight cross-headings, one hundred yards apart. There are a number of openings to day. The drainage is by natural gravity, and is nearly perfect, the ventilation has been made all that the law requires. A shaft has been opened, and a good ventilating furnace has been erected, and the air conducted to the face of the workings. The colliery has been mapped, and everything put in good order inside the mine. It has a capacity of five hundred tons per day, and is operated very steady. David B. Ashbaugh, superintendent.

The Eldorado mine is on the South-west Pennsylvania road, two miles north of Connellsville, Fayette county. It is operated by Zuck & Henry. Mine consists of two drift openings, and has been in operation three years. The main-heading is two hundred yards long, with one cross-heading about the same length. Fifteen men and one mule are employed inside. The product is made into coke.

The Plank Road mine is in Union township, Allegheny county, and is operated by John Carlin. It is a drift opening. The main-heading on the face of the coal is one thousand one hundred yards long, and there are two cross-headings. It has not been well ventilated, but the last year Mr. Carlin has opened a shaft and built a small furnace, which produces all the air required for the mine. But the air was not conducted to the face of the headings, owing to the air-course being behind. The mining boss promised to remedy this at once. Mr. Carlin has always expressed a willingness to comply with the requirements of the law. There are thirty men and two mules employed inside. The mine has a capacity of three thousand bushels per day. Charles Stine, mine boss.

Beall & Ewing's coke works are located in Nicholson township, Fayette county, two miles below New Geneva. It is a drift opening. The main-headings are double, six hundred feet long. Fifty yards from the pit-mouth there is a face heading, and near the face of it is another heading running to the crop line of the coal seam. The coal seam here has many of the peculiarities of the coal of the great Connellsville coal seam, of which it is a continuation. A second opening is being perfected. This is a new enterprise, having only been opened a little more than a year.

There are sixty coke ovens here, and forty men employed inside and outside. The product is shipped by the Monongahela river. William Beall, superintendent; Noah Johnston, mine boss.

The Umpire mine at Brownsville, Fayette county, is operated by John S. Cuningham & Co. It is a drift opening. The main-heading is thirteen hundred yards long, and open through the hill. Eight hundred yards from the pit mouth is a face-heading seven hundred yards long. From this three cross-headings are turned and opened to the line of the company's coal field. These headings are all single, and are connected by air courses. The drainage is in good condition. Ventilation has been greatly improved by erecting a furnace at the back opening. There is a good roof. The hauling roads are laid with iron. The mine has a capacity of eight thousand bushels per day. There are twenty coke ovens not in use here.

The Knob Colliery is located one mile above West Brownsville, in Washington county. It consists of a slope and shaft. The main-heading running west is two hundred yards long, with three cross-headings. The mode of working is double-heading room and pillar, and ventilation and drainage are effected by shaft and steam pump. The Pittsburgh seam is here eight feet thick, and of fair quality. It is here below the river bed, and water is rather troublesome. It has a capacity of one hundred and fifty tons per day.

The mines owned and operated by Gray & Bell are three in number—the Chess mine, the Coalridge, and the Venture mine. The last two are what is known as river mines.

The Coalridge mine is located near the head of the waters of Little Saw Mill Run, in Union township, Allegheny county. It is a drift opening. The main-heading is opened on the end of the coal for twelve hundred yards, then on the face of the coal seam for five hundred yards, to the line of the company's coal field. There are five cross-headings, all connected by air courses. At the interior end of the mine there is a small shaft, which serves the double purpose of inlet for ventilation, and ingress and egress for the miners. Near the entrance to the mine the company have sunk a shaft, and erected a very good ventilating furnace, which produces some twenty-five thousand cubic feet of air per minute. There has been other general improvements made, which renders it all that the law requires.

The Venture mine is just opposite the Coalridge mine, on the other side of the road. It is a drift opening. The main heading is on the end of the coal for two thousand yards, then on the face five hundred yards, and connects with a system of drainage made at a great expense to the company. It also connects with the Chess pit, of which it really forms a part. The internal condition of the mine has been greatly improved in the last year. The air courses have been thoroughly overhauled, and a part of the working assigned to, as far as ventilation is concerned, the Chess pit. It has been put on the double-heading system of working, which is considered by the manager by far the best mode of working. It has five cross-headings, and a capacity of eight thousand bushels per day, and employs from sixty to eighty men. Martin Gray, superintendent; William Carter, mine boss.

The Chess pit, operated by the same company, is located in Union township, Allegheny county. It is a drift opening, and worked partly on the double-heading system, and ventilated by a powerful fan. It has three openings, and has connections with the Venture mine. It employs, inside and outside, one hundred and forty men and thirteen mules. The haulage is done partly by mules and partly machinery and incline plane. The fan, which is sixteen feet in diameter, is placed at the mouth of one of the drifts, and has a capacity of sixty thousand cubic feet per minute. The average sectional area of the airways is thirty-five feet, and over thirteen thousand feet long. At sixty revolutions per minute, forty-five thousand cubic feet of air per minute was sent through the working. The main intake is fully two miles from the outlet, and the air is conducted around the workings in three splits. There are five cross-headings, two of which are over eight hundred yards long. Two over casts have been built, and brick stoppings erected on the main air-courses. The hauling roads are all laid with iron, and, altogether, the mine is in excellent condition, as are all the mines of this company, except the fan at shaft No. 3, Penn Gas Coal Company mines, which is eighteen feet in diameter. This fan is the most powerful fan in my district. Mr. Gray takes a pride in keeping his mines in first class condition, and has spent large sums of money in doing so. He is one of those who think that good ventilation is the best, both for workmen and employer, and the inspector is always a welcome visitor to him. This mine has a capacity of ten thousand bushels of lump coal per day. Martin Gray, superintendent; William Short, mine boss.

The Enterprise mine, in Union township, is operated by Hartley & Marshall. It is a drift opening. There are also two shaft openings. One is used as outlet for ventilation and drainage, in the other Mr. Hartley has erected a stairway, and is used for ingress and egress. It consists of main-heading and five cross-headings, with an average length of two hundred and fifty yards. Ventilation is ample, and is by fire under the boilers, and steam exhaust from pump. Ventilation and drainage is satisfactory, and the mine is in good condition. William Beadling, mine boss.

The Summerhill mine, located at Leasdale, Scott township, Allegheny county, is a drift opening. It consists of two short headings connected by face-heading, and an air course, and is owned by J. W. Jones, of Greensburg, Westmoreland county. There are three openings for ventilation and drainage, and employs thirty-five men; but has run but little the last year. It is not in operation.

The Bower Hill mine, A. J. Schultz, operator, is on the Chartiers Valley railroad, in Scott township, Allegheny county. It is a drift opening, and consists of two main-headings, and one cross-heading. The ventilation and drainage are by natural means. During the last year, it has been much improved in a general way, both inside and outside. New outside tracks have been laid, and a new tipple erected. It has been in operation four years, but has not been operated steady. At present there are thirty-five men employed, and has a capacity of three thousand bushels per day. Adam Hammell, mine boss.

The Imperial Coal Company mines are located on the Montours Run railway. Are two in number, about two miles apart. Both are new enterprises, and operations are just commencing. Opening, new headings, erecting tipples, &c.

The Glendale mine, located on the Chartiers Valley railroad, in Scott township, Allegheny county. This is a small mine consisting of two drift openings, one hundred yards apart, and connected by face-heading, and employs about twenty men. The mine is new, and but little work has been done here. The owner, Major Glenn, is sinking a shaft for ventilation. It has a capacity of two thousand bushels per day. J. H. Robb, mining boss.

The Nixon mine, operated by the Chartiers Valley Coal Company, in Scott township, Allegheny county, is a drift opening. It consists of main-heading and air-course parallel with it, four hundred yards long; one face-heading and one cross-heading, connected with the main-heading by an air-course. Ventilation has not been satisfactory, but the owners are improving the furnace, which, it is thought, will render it beyond complaint. Thirty-eight men are employed here. The mine has a capacity of three thousand bushels per day. David Boden, mine boss.

The Glass House mine, at Woodville, in Scott township, Allegheny county, employs fifteen men and is operated by Lindsey & McCausland. It consists of two drift openings, one of which has been opened this year. The other improvements are a new tipple and side track of sufficient capacity for doing a good business. Mr. Lindsey expects to improve their business the next year.

The Fort Pitt mines, located in Collier township, Allegheny county, are owned and operated by the Fort Pitt Coal Company. It consists of two drift openings, is worked on the single-heading system, room and pillar, and ventilated by the natural forces. The main-heading is one thousand seven hundred yards long, and has five cross-headings with air-course connections every one hundred and fifty yards. Ventilation is in fair condition, and is due principally to three openings at the interior end of the mine. The hauling roads are in good order and laid with iron, and the general condition of the mine is much improved. It has a capacity of seven thousand bushels per day. John McCriket, superintendent; Patrick Hammill, mining boss.

The Cherry mines, owned and operated by Morris McCue, are located in North Fayette township, Allegheny county. It is a drift opening on the face of the coal. The main heading is nine hundred yards long, and there are two cross-headings. The mine has four openings. The former coal field is exhausted, and Mr. McCue has secured twenty acres more. Another opening has been made this year, which improved the ventilation somewhat. There is a good roof. The hauling roads in fair condition. Forty-six hands and six mules are employed here. Patrick Joyce, mine boss.

The Walnut Hill mines, T. B. Robbins & Co., are two in number—the Primrose and the Midway mines, and both are located in Washington county. The Primrose is a drift opening, partly on double heading, and partly on the single heading system. Ventilation by small shaft and fire baskets. There are two main headings, eight feet wide, and six feet high, with double track frame pit mouth. The main headings are fifty yards apart, and run parallel to No. 5 cross-headings. The cross-headings, five in number, are turned right and left, at right angles with the main-heading. These headings are one hundred and fifty yards apart, rooms being worked to the center of the block, when the pillar is removed. The cross-headings are connected by air courses every one hundred yards. The air is circulated to the face of all the headings, then returned to the outlet. The mine is in good condition, and the men well supplied with timber. There are from eighty to ninety men employed here. Capacity is four hundred and fifty tons per day. T. B. Robbins, superintendent; Charles McDonald, mining boss.

The Brier Hill mine, operated by the Richardson heirs, is at McDonald station, Washington county. There are a few men engaged removing pillars. The coal is nearly exhausted, and it will be closed shortly. Alexander Patterson, superintendent.

The Walnut Hill Coal Company's mine, at Midway, Washington county, is a drift opening. It is worked on the block system, and ventilated by shaft, and furnace under boiler, and steam exhaust from the pump. It consists of main-heading, and five-cross-headings. The latter are one hundred yards apart, with air courses the same distance. Ventilation is effective, and is conducted to the face of the workings. The mode of working is much the same as that of the Primrose mine, all the pillars being removed as the work progresses. It is well drained, which is effected by steam pump. The hauling roads are laid with iron, are dry, and in good order, and the men are well supplied with timber. There are a few coke ovens here, coke being manufactured to a limited extent. These mines have been operated very steady the last year, and employ about sixty-five men. Capacity four hundred tons per day. T. B. Robbins, superintendent; Samuel Findley, mining boss.

The Block Coal Company's mine, Taylor, Ulp & Co., are not in operation.

The Connellsville Gas Coal Company slope is located one mile south of Connellsville, on the South-west Pennsylvania railroad, Fayette county, it is opened on the end of the coal, on a ten degree dip, and is fifteen hundred feet long. From the bottom of the slope,two flat-headings are run, where mining operations are conducted. The hauling to the foot of the slope is done by mules, the coal being drawn out of the slope by wire rope and steam power. The mine was opened by the company in 1865, and ninety-nine coke ovens built, and the manufacture of coke commenced. Two steam pumps are used to drain the mine. This company has thirty-one hundred acres of this nine-foot seam of coal, and is contemplating making some changes in the manner of working the same. The ventilation of the mine is effective, and is produced by steam exhaust and heat from the pumps used for draining the mine. The general mode of working and drainage is fair. H. Weekham, superintendent; Thomas Jenkins, mining boss.

The Deer Park mine, operated by the Mahoning Coke Company, is located at Dunbar, Fayette county. From the South-west road a small branch road leads to the mines of Henderson & Co. and the Mahoning Coke Company mines, where ninety coke ovens has been built for the manufacture of coke. The slope is sunk thirteen hundred and fifty feet on a dip of thirteen degrees, and was first opened in 1871 by Paul Brown & Co., who operated it for a number of years. From the foot of the slope the workings extend right and left, the heading being driven across the pitch. Inspection of the mine showed the ventilation and drainage to be in good condition. The air being carried forward as the work progresses. Drainage is effected by a steam pump. The hoisting being done by steam power. The product of this mine is manufactured into coke. John Holsing, mining boss.

The Dunbar Furnace Company's mine is located one mile west of that town, at the head of a narrow gauge road, owned and operated by that company, in Fayette county. The slope is sunk on a dip of about twelve degrees, and is one thousand three hundred feet long. From the foot of the slope double-headings are run five hundred yards, and the air circulated to the face of the workings. In the upper or abandoned part of the working a number of miners are at work taking out iron ore. This vein of ore, about one foot thick, lies four feet below the bed of the coal seam, and both coal and iron ore are taken out of the same pit. Above the coal bed, near the top of the hill, lies a bed of limestone, which is also being utilized. The iron ore, limestone, and coal all being taken out of the same hill. The coal is hauled out of the mine by steam power, and manufactured into coke, and, together with the other minerals, consumed by the furnace in the manufacture of pig iron. The ventilation of the mine is due to the furnace at the top of a small shaft.

Hogsett, Watt & Co.'s slope is located two miles south-west of Dunbar, Fayette county. The slope is opened on the end of the coal, on a dip of twelve degrees, and is one thousand one hundred feet long. The mine is opened by driving headings from the foot of the slope toward the line of the company's coal. An examination of the mine showed the ventilation to be very bad. At the outlet a volume of air was ascending of ten thousand feet per minute, but no provision is made to carry it forward to the working places of the mines; and beyond, a few steps from the bottom of the slope, there was little or no circulation. Mr. Hogsett promised to have the ventilation attended to immediately. Drainage is effected by steam pump at the foot of the slope. The mine has three openings, and one hundred and twenty-seven coke ovens, and the product is made into coke.

The Frost mine is located one mile south-west of Hogsett, Watt & Co., but not employing more than ten men. It was not visited.

The Lamont Furnace Company slope is located at Lamont, on the South-west Pennsylvania railroad, in Fayette county. It is sunk seven hundred feet on a dip of fifteen degrees, and from the bottom of the slope headings are turned right and left. The iron ore that lies below the coal is wrought in this mine. As the coal mining progresses, the iron ore miners follow up the work of extracting the ore. The ore being taken out at separate opening. The ventilation and drainage were found to be very poor. At the foot of the slope there is a good supply of air, but for want of stoppings and doors, it does not reach the men at the head of the workings. Drainage is effected by steam pump, and the coal is drawn out by steam power. There are one hundred coke ovens connected with the mine, and the product is made into coke, and consumed at the furnace.

The Oliphant Furnace Company's mine is located at Oliphant, the terminus of the South-west Pennsylvania railroad, five miles south of Uniontown, Fayette county. This mine was opened two years ago, and consists of a small shaft and drift. I visited the mine and found less than ten men employed mining coal. A number of men are engaged mining ore below the coal bed, along the outcrop of the two beds. At this point the coal seam crops out, and a number of men are mining it in banks. The coal produced here is coked on the ground, coke ovens being dispensed with, but the quality of coke produced appears to be very poor. The iron ore, limestone, and coal are all procured in the same ground. The furnace produces about twelve tons of pig metal per day.

Samuel Warden & Co.'s, mine, is located at Stonerville, on the South-west road, Westmoreland county. This mine has eighteen coke ovens, and only employs six miners. It not coming under the provisions of the law, it was not inspected.

The South-west Coal Company mine, is located at Tarr station, on the South-west Pennsylvania road, in Westmoreland county. It was opened in 1872, by Peter Tarr. The main-heading is opened four hundred yards, and connects with two cross-headings. The workings are well laid out, but the ventilation was found to be, (for want of doors and stoppings,) very sluggish. The drainage is very good, and, for a small outlay, the mine could be made to conform to the provisions of the law. There are sixteen coke ovens here, part of the coal being manufactured into coke, the balance is used by the locomotives on the South-west road. About one hundred and fifty acres of coal yet remain to be taken out.

Te Greensburg Coal Company mine, is located one mile east of Greensburg, on the South-west road, Westmoreland county. It consists of a single-heading, driven throuh the first and second hills, and both are nearly worked out. Only about five acres remain to be mined. The mine was opened in 1872, by this company, in the second hill, where operations are carried on. Mining is rendered more dangerous than in most mines, on account of the many slips and horse-backs in the slate overlaying the coal seam, yet, on inquiring, I was informed that few accidents occur at this mine, and certainly none has come to my knowledge yet. Ventilation is effected by shaft at the head of the main-heading, and is satisfactory. There are ten coke ovens connected with the mine, but only one of them in use. W. J. Jones, superintendent.

The Millwood Coal Company's shaft is located three miles north of Millwood station, in Westmoreland county, and is reached by narrow-gauge railroad from Millwood, on the Pennsylvania road, to the mine. Coal was reached at the depth of two hundred and three feet. Nearly a mile north-east of the shaft, a slope for ingress and egress has been sunk. These two openings have required a large outlay of money. An inspection of the mine found the ventilation and drainage to be very good. Most of the headings are double, and the doors and stoppings in their proper places, and in good order. Ventilation is effected by the action of a fan, twelve feet in diameter, at the top of the shaft. In opening up the mine a fault was encountered. Three hundred feet from the foot of the shaft, a tunnel driven in the rock struck the coal again at the distance of fifty yards. The shaft is well protected, and the ropes and engines are all in good order.

The Isabelle Furnace Company's mine is located at Cokeville, on the West Pennsylvania railroad, Westmoreland county. It consists of two main-headings opened on the dip of the coal, nine hundred and sixty-three yards long. From these two headings, face-headings run right and left. The workings are well laid out, and the drainage is good. Ventilation is effected by the natural currents, but for want of two doors and a number of stoppings, it is not circulated to the face of the workings. Otherwise the mine is in good condition. A steam pump drains the mine of water. The coal is drawn out of the mine by rope and steam engine, and broken by machinery and passed through a washer before being taken to the coke ovens. From here it is hauled by a locomotive engine over a narrow-gauge road to the ovens, two hundred in number, and manufactured into coke. The company have eight hundred acres of coal yet remaining in the hill.

Watt & Company's slope is located just below Latrobe, on the Pennsylvainia road, in Westmoreland county. This mine has not been in operation the last few month, with no prospects of starting up. The mine was not inspected.

Morgan & Co.'s mine is near the last one. Operations being suspended, the mine was not examined.

M. Saxman, junior, & Co.'s mine is located one mile east of Latrobe, in Westmoreland county. The main-headings are opened on the face of the coal, from which cross-headings are turned to the left. The drainage was found to be good, but the ventilation is not satisfactory. A small locomotive hauls the mine wagons up a grade to the tipple. From here it is shipped over the Pennsylvania road. It was opened in 1873. About one hundred acres yet remain to be taken out of this mine.

The Loyalhanna shaft is located at Loyalhanna, on the Pennsylvania road, in Westmoreland county. Operations were commenced by the company six years ago, who have kept the mine in steady operation since that time. The coal seam was reached at the depth of one hundred and fourteen feet. Mining operations were commenced by driving headings right and left from the foot of the shaft. The mine was worked a few years ago with a single shaft; a partition was run down the center of the shaft, one side being used as the outcast, the other the downcast. But this was not satisfactory, as the ventilation was defective, and a slope three hundred and forty feet deep was opened, which answers the double purpose of ventilation, ingress and egress for the men. The ventilation and drainage was found to be in fair condition, the air being circulated to the face of the headings and cross-headings, the shaft acting as the outlet, the slope the inlet. Drainage is effected by three steam pumps. There is one hundred coke ovens at the mines, and a part of the product is manufactured into coke, and part is taken by the locomotives on the road.

The Saltsburg Coal Company's mine is located two miles west of Saltsburg, on the West Pennsylvania road, Westmoreland county. From Fairbank station a branch road leads to the mine, and strikes the coal outcrop distant two miles. From here the mine is entered on a level, in a southwest direction. The main heading is opened twelve hundred yards, to the company's line, the headings running right and left. The work is well laid out, the ventilation and drainage satisfactory. Ventilation is due to the furnace at the foot of a shaft, near the head of the workings, the water being discharged by natural gravity. This mine is located on the northeast outcrop of the Pittsburgh seam, and the coal strata is mixed with bands of shale and slate, which is very troublesome to the miner. This mine has been in operation twelve years, and five hundred acres of coal yet remain to be mined.

The Northwest Coal and Iron Company's mine is located at Grinder station, West Pennsylvania road, Westmoreland county, but it is not in operation, and was not inspected.

Laufmann & Co's. mine is located opposite Appollo, in Westmoreland county. It is a level opening, and consists of two headings on the end of the coal, one hundred yards apart. One hundred and fifty yards from the pit mouth a cross-heading connects the two. On theset wo headings rooms are turned twenty-one feet wide, run up to the center of the block, and then abandoned. No ribs or pillars being taken out, a creep came on the mine in the early part of March, and work was suspended for a time and the main-heading cribbed with timber; but it is again in operation, but is laboring under some difficulties on account of the air-way partly closing, but men are at work night and day driving a new one, and until that is accomplished the ventilation will remain defective. Ventilation is produced by the action of a small furnace at the mouth of one of the drifts. Drainage is effected by steam pump. The product of the mine is consumed at the company's mill, on the other side of the river.

The mines of the Shafton Coal Company, located in Westmoreland county, consist of two shafts. The hoisting shaft is one hundred and fifty-four feet deep; the other is ninety-six feet deep, and is used by the workmen for ingress and egress. This shaft is provided with the best stairway of any shaft in the district. The stairway is three feet wide, with landings every ten feet. The mode of working is single-heading, with an air-course running the whole length of the cross-heading at the upper side of the workings. The air is received from the shaft, conducted along the air-course, and distributed to the cross-headings, four in number, then returned by the main-heading to the outcast shaft. Ventilation is fair, and is effected by steam exhaust from the pump used to drain the mine. The roof is bad and requires the constant attention of the mining boss. New hoisting cages, with approved safety catches, have been put in.

The Ocean mine, operated by W. L. Scott & Co., are located at Moor's station, Westmoreland county. It is worked on the single-heading system, and ventilated by furnace. This is a drift opening. The main heading is sixteen hundred yards long, and has six cross-headings. After a careful examination of all the workings, I found the air current too feeble, and the mine insufficiently ventilated for the number of men employed, and so notified the superintendent, Mr. John F. Hoseck, who expressed his willingness to do what ever the law required, and he promised to improve the ventilation by enlarging the furnace and increasing the height of the stack at the out cast. The mine has a good roof, is well drained, and the roads are in good order. The system of working, is room thirty feet wide, with road in the middle of the room. The pillars being left in the mine. A change was advised to room and pillar.

The Pittsburgh and Castle Shannon Coal Company's mines, are two in number. The old pit is located at the head of Big Saw-mill Run, Allegheny county, and has three drifts opened. One of them is worked out. No. 3 drift, is three hundred yards long, and has a face-heading five hundred yards long, and three cross-headings, from which rooms are turned. This embraces all the coal remaining to be mined here. There is also another heading driven nearly a mile to day; but is connected with the new mine of Fair Haven, and forms a part of it, as the coal will be taken out that way.

The new pit is at Fair Haven, one mile south of the old one, and has two main-headings, three hundred yards apart, and three hundred yards long, and three cross-headings. Two of these are driven through to No. 2 main-heading, and one is connected with a shaft, which assists the ventilation from No. 2 main-heading. Another is driven to day. This mine is worked on the single-heading system, and ventilated by the natural forces. The air current was feeble, yet owing to the headings all being through to each other, and the short distance in from day, there was little noxious gases present. Another heading to the west of No. 2 main-heading, is being driven, and here I advised the superintendent to sink a shaft, and erect a good ventilating furnace, when he expressed his willingness to do what the law requires for the health and safety of the men under his charge.

Armstrong's mine, at Armstrong station, Westmoreland county, is a drift opening. Worked on the single-heading system with room and pillar, and ventilated by shaft and furnace. The main-heading is seventeen hundred yards long and has four cross-headings, about four hundred yards long. This mine has been much improved since my first visit by shortening the air way and hauling road, and the erecting of doors and stoppings. An air measurment at the outlet showed a fair volume of air in circulation, but the same test at the face of the working showed the failure on the part of the mining boss to conduct it there. This is a common failure with a great many mining bosses, and when a test is made they are astonished at the results. The furnace was found to be too small to move the required amount of air, and the superintendent, Robert Latimore, promised to have it enlarged immediately.

Street's Run mine, I. D. Risher, operator, is located in Baldwin township, Allegheny county, is a drift opening, worked on the single-heading system, and ventilated by furnace and shaft. The mine has two main and six cross-headings. At the time of my first visit I found the air so foul in some of the headings that a light burned with difficulty, but on consulting with Mr. Risher he expressed his willingness to do anything required by the law to put his mine in order. I advised him to sink a shaft and build a furnace, which he did at once. Although the furnace is much smaller than recommended by me, yet it has made a great improvement. Stoppings and doors has been erected, and the air circulated to the face of the headings. Drainage is very good, and the mine is in good condition.

The Wood coal mine, operated by Wettengale & Gormley, is located in

Allegheny county. It is a drift opening, and has a main-heading and two cross-headings, and ventilated by the natural forces. The longest of these headings, where the men are working, is driven through the hill to day. The other is just commenced, and, at the time of my visit, only one man was at work on it. This is a small mine, employing only thirty-five men, and will last but a year or so. I found a fair current of air in the mine. Drainage is in fair condition.

The mine operated by James Clarke, located in Allegheny county, consists of two shafts and a slope. The main-heading is three hundred yards long, and has two double cross-headings. The system of working is room and pillar. Since my first visit a shaft has been sunk, and a furnace built, and some improvement made to the drainage. The ventilation is now in good condition, and everything is very satisfactory. It has a capacity of three thousand bushels per day. W. J. Morgan, mining boss.

Camp Hill mine, D. Steen & Sons, operators, located at Mansfield, Allegheny county, is a drift. The main-heading is twelve hundred yards long, and has six cross-headings, four of them opened to day. The system of working is single-heading, room, and pillar, and ventilation by natural currents. This mine has been favorably situated for natural ventilation. Being located along the out-crop, they could drive out all the headings to day, but as this part of the mine is nearly worked out, Mr. Steen has commenced to open up a large body of coal by driving double-headings, and he contemplates using artificial means to ventilate the mine. Drainage is good, effected by natural gravity. One hundred and ten men are employed here. It has been operated very steady the last year, having a capacity of eight thousand bushels per day. William J. Steen, superintendent; Nilson Rosser, mining boss.

The mines of the Westmoreland Coal Company are located in Westmoreland county, and are seven in number, viz: Spring Hill, New Larimer, Old Larimer, South Side, North Side, Westmoreland Shaft, and Foster Slope. Of these, four only are in operation.

Spring Hill, located at Wall's Station, is a very old mine, and consists of a drift, a main-heading, and one cross-heading, and is ventilated by a small furnace, ample for the ventilation of the mine, which is nearly worked out, little remaining but ribs and heading-pillars.

Old Larimer, located at Larimer station, is a drift, worked partly on the single and partly on the double-heading system, and ventilated by a large new furnace. One of the main-headings is driven through the hill, and connects with the New Larimer mine on the north side. On the south side of the mine the headings are all double, and the main-headings have connection with the South Side mine.

The South-side mine, located at Irwin station, is a drift opening, worked on the double-heading system, room and pillar, and ventilated by furnace. It has three double main headings, and three sets of cross-headings. The lower main-heading is eighteen hundred yards long, and has four cross-headings. The middle main-headings are nineteen hundred yards long, and have three cross-headings. The upper main-headings are nineteen hundred yards long, and have four cross-headings. The latter connect with a return air-course running back to the furnace. This air-course is eight feet wide and seven feet high, and is clear of all obstruction, and twenty thousand cubic feet of air is made to sweep the face of all the headings. Ventilation has been much improved by erecting new doors and brick stoppings, thereby shutting off all leaks. The mine generates some carbureted hydrogen gas; but under the present management it is perfectly safe. This mine receives the water from the Larimer pit, both are discharged by natural gravity.

The Northside Irwin mine is located at Irwin station. It is a drift operated on the system of single-headings. It consists of a main-heading and five cross-headings, and ventilated partly by furnace, and partly by natural currents. This is a very old mine, having been in operation twenty-five years, and little coal remains. All the headings were examined, and the ventilation and drainage found in fair condition. A locomotive engine hauls the coal through the first hill, a distance of two thousand yards, the tunnel being ventilated by a ten foot fan.

The Foster slope, located at Penn station, is another well-ventilated mine. Is worked partly on the single, and partly on the double-heading system, and ventilated by one of the Champion ventilators, manufactured by Fraser & Chalmers, of Chicago, Illinois, and is doing good service acting as an exhaust fan. The fan is run at about one half its capacity, and produces all the air required for this large mine. The lower main-headings are sixteen hundred yards long, and have five cross-headings. The upper main-heading is nine hundred yards long, and has five cross-headings. The air is made to sweep the face of all the headings, then is returned to the fan at the outcast, by way of the lower air-course. The drainage of this mine is very good; but the roof is faulty, full of slips and horse-backs, which render it very dangerous to the miner, and requires his constant attention, or loss of life or limb may result; but the men are well supplied with timber, and the mining boss is very vigilant, using great care to protect the men under his charge.

The other mines operated by this company were, at the time of my visit, not in operation. But all that are working are in excellent condition, and Mr. Schullenberg, the superintendent, has always been willing to do all that the law required.

The mines of H. B. Hays & Brother, located at Beck's Run, Allegheny county, are two in number. The oldest of them consists of a main-heading six hundred and fifty yards long, driven through the hill to day, and has two cross-headings three hundred yards long, which are connected with an air-course at the head. The present working embraces all the coal that remains in this part of the mine, which will soon be closed. Ventilation is effected by natural currents.

The new pit lies south of the old one, and is connected with it by means of an air-course. It has four level openings and two small shafts. The main-headings are three in number, and are each about eighteen hundred yards long, which opens up the coal field to the line. Two of these headings are driven to an abandoned coal mine, and a large body of water was met with, which was set free by bore-holes kept ahead of the working face. On one of the latter headings a shaft is sunk, where the greater part of the water is pumped by steam power. A system of drainage is being constructed structed. When completed, the water will be discharged by natural gravity. Both of these mines are worked on what is called the block system. The headings are driven one hundred and fifty yards apart, rooms being turned every thirty-three feet, and worked to the center of the block, when the backward move begins. Ventilation is effected by the two furnaces and steam exhaust from the pumps. I found a fair current of air in both of the mines. When the drainage is completed the pumps will be removed, and the company contemplates erecting a large ventilating furnace at the foot of one of the shafts. This mine is quite new. Little work has been done except that of driving the headings, and the superintendent, Mr.

Troutman, expressed the opinion that, when completed, it will be one of the best in the district.

Six Mile Ferry Mine, No. 1, is located in Baldwin township, Allegheny county, and is owned and operated by H. B. Hays & Brother. It consists of a drift opening running south through the hill, and is fourteen hundred yards long. From this main-heading ten cross-headings are turned, five of which are worked out. A locomotive engine hauls the coal through the main-heading, from the head of No. 8 cross-heading to the top of the inclined plane. The cross-headings are all single, and connect with another heading along the line of the company's coal. The system here is room and pillar, nearly all the coal being secured. Since my last visit, a new track has been built in the main-heading six hundred yards, of heavy iron, with the intention of running the locomotive through the hill. Ventilation has been improved by an enlargement of the furnace, and an addition to the stack on top of the shaft. On the night of April 22, the river tipple was burned, and mining operations were suspended for a time.

The new mines, at Six Mile Ferry, are owned and operated by H. B. Hays & Brother. Have been in operation one and a half years. The improvements here are a new engine track nearly a mile in length, a new river tipple to re-place the old one burned last April, a new incline plane check-house, etc. The mine consists of two drift openings, one hundred and sixty yards apart, nine hundred yards long, and both are through the hill to day. These two headings are connected by driving face-headings. One hundred and ten men are employed here inside, and eighteen outside, and, in the month of November last ninety-seven thousand three hundred and ninety-three bushels of lump coal were mined. The hauling roads are laid with iron, and in splendid condition. The total amount of coal run by this firm at their four mines in November last was three hundred and sixty-four thousand five hundred and sixty-one bushels or fourteen thousand five hundred and eighty-two tons. This is exclusive of nut coal and slack, which would increase the totals fully thirty per cent. Mr. Watson, superintendent.

The Laurel hill mine is situated near McDonald station, Washington county. It consists of a main double-heading and four cross-headings in operation. The main-heading is six hundred yards long, and the cross-headings are one hundred and fifty yards apart, with air-courses every two hundred yards. The system of working is single-heading, room, and pillar, but the double-heading has commenced at the back end of the present workings. Some trouble has been experienced here, owing to weak pillars and bad mining, but it is in better condition than when visited before. The mine ventilation has never been very satisfactory; but, on my last visit, the superintendent promised to have the matter attended to immediately. A second opening for ingress and egress has been made. The mine was opened in 1870 by the present operators, W. P. Rend & Co., who made great progress the first few years, but the last year or two it has not been operated very strongly. Hugh Knox, superintendent; David Brown, mining boss.

The mines of the Pittsburgh and Connellsville Gas Coal and Coke Company are located at Connellsville, Fayette county. They are two in number, a shaft and slope, having under ground connections. The men working in the slope are mostly employed removing pillars, in order to close up that part of the mine, very little solid coal remaining. A number of improvements have been made to the shaft, covers and safety catches have been put on the cages used for hoisting, and a road has been cut around the bottom of the shaft, to enable persons to cross from one side of the shaft to the other, without going under the ascending or descending cages. The ventilation has been improved by driving air-courses and erecting doors, and is now in fair condition. The manner of working here is single-heading, room twelve feet, and pillar twelve feet wide. This mode of working allows nine tenths of the coal to be removed for use of the coke ovens. The roads are all iron. Thomas Lowden, mining boss.

Sterling mine, No. 2, is located on the Hickman branch of the Baltimore and Ohio railroad, and is operated by Brown & Cochran. It consists of a main-heading, one thousand yards long, and seven cross-headings. Two of the headings running west are opened to day, and one of the east headings connects with the Tyrone mine, by means of an air-course. The mode of operation is by room and pillar, one that is best suited to this region. An air-course runs from the bank of the Youghiogheny river, nearly a mile in length, to the face of the workings, but no artificial means are employed, and the ventilation is sluggish, and sometimes not enough to move the anemometer, yet the superintendent said the miners never complain. The roads are all constructed of wood, and the drainage is fair. This mine requires artificial ventilation, which Mr. Cochran promised should be applied shortly.

The New Eagle mine, operated by Lindsay & McCutsheon, is situated near Monongahela City, Washington county, it is a level drift opening, and consists of two main-headings and four cross-headings. The main-headings are two hundred and fifty yards apart, and cross-headings one hundred and fifty yards apart. Two hundred yards from the pit mouth is a shaft on the upper main-heading by which ventilation is effected. The mine generates some carbureted hydrogen gas, and the ventilation, on my last visit, was not satisfactory. A furnace is being constructed by the company at the foot of the shaft, which will have the desired effect. The system of working is to drive up rooms twenty-seven feet wide to the center of the block, and then abandon them. This is a very bad practice, and I advised the superintendent to change his mode of working to room and pillar. Edward Ody, superintendent.

The mines of Jones & Laughlin are located on the south-side of Pittsburgh, and consist of a main-heading and five cross-headings. The main-heading is two thousand yards long, and is connected at the head with Keeling & Co.'s mine. The cross-headings are three hundred yards long, and connect with an air-course at the line of the company's coal. The system of working here is room and pillar, all the coal being removed and the timber drawn. I have made three visits to this mine. Since my first, the mine has been greatly improved. A new track has been laid in the main-heading. A number of doors and stoppings and a powerful furnace have been built, and the mine put in first class condition. It is now one of the best mines in the district. James Doran, mining boss.

In the month of February, complaint was made to the court of Allegheny county, against Roger Hartley, operating the Enterprise mine, situated at Banksville, Allegheny county, for not "furnishing timber of suitable lengths and sizes for the places where they are to be used, and placing them in the working places of the miners, as directed in section five, of the act of April 18, 1877, known as the ventilation law. And from the manner in which the case was disposed of, it would appear that the law will not bear the construction generally given to it. The suit was not brought to compel the operator to furnish the timber in the working places of the men, for that was already done, but to test the law, to see if the operators were not compelled to cut the timber of such lengths and sizes as would enable the workmen to use them without having to re-cut them after receiving them in their working places. The case was disposed of in the following manner:

Commonwealth *vs* Roger Hartley.	In the court of quarter sessions of Allegheny county, No. 99. March sessions, 1878. Charge, misdemeanor.

Under an act of Assembly, approved the 18th of April, A. D. 1877, entitled "An act providing the means for securing the health and safety of persons employed in the bituminous coal mines of Pennsylvania, being the owner, lessee, or agent of the Enterprise coal works, in said county. The defendant had legal notice that section five, of said act, was being violated. In this, that there was "not sufficient timber furnished of suitable lengths and sizes for the places where they are to be used, and placed in the working places of the miners." February 4, 1878, after said notice had been given, and information was made by me, as inspector of bituminous coal mines, first district, charging defendant with misdemeanor, in neglecting or refusing to perform the duties required by said section five, that a true bill was found by the grand jury of said county, and the case came on to be tried on the 25th day of April, A. D. 1878, before his Honor Judge White. The jury being sworn, and the case stated, and evidence given, showing that the timber in the working places of the miners to be used for posts to support the roof, was not of suitable lengths, being too long by four to nine inches. Granting all that the prosecution claimed, the court held that because the timber was a few inches to long, that the statute or act could not be so strictly construed as to convict the defendant in this case. The following order in said case was made:

Now, April 25, 1878, on motion of John S. Robb, district attorney, a *nolle prosequi* is allowed. By order of the court.

Names and Address of Operators of Mines located in Allegheny County.

Imperial Coal Company, 349 Liberty Street, Pittsburgh.
Mansfield Coal and Coke Company, 382, Penn avenue, Pittsburgh.
Mellon & Sons, East Liberty.
David Steen & Sons, Mansfield Valley.
Taggert & Hopkins, Federal street, Allegheny City.
Fort Pitt Coal Company, 337 Liberty street, Pittsburgh.
Morris McCue, Third and Fry streets, Pittsburgh.
George W. Schludenbirg, box 784, Pittsburgh.
Consolidated Gas Coal Company, Noblestown.
Dickson, Stewart & Co., 404 Liberty street, Pittsburgh.
W. P. Rend & Co., 413 Liberty street, Pittsburgh.
Major Glenn, Mansfield Valley, Allegheny county.
Chartiers Valley Coal Company, Mansfield Valley.
Lindsey & Co , Woodville, Allegheny county.
J. W. Jones, Greensburg, Westmoreland county.
A. J. Schultz, Woodville, Allegheny county.
James Clark, Bridgeville.
Wettengale & Gormley, West Pittsburgh.
Thomas Fox, Thirty-sixth ward, Pittsburgh.
John Carlin, Thirty-sixth ward, Pittsburgh.
Gray & Bell, Thirty-sixth ward, Pittsburgh.
Hartley & Marshall, Thirty-sixth ward, Pittsburgh.
Castle Shannon Coal Company, Southside, Pittsburgh.
Birmingham Coal Company, Twenty-first street, Southside, Pittsburgh.
Jones & Laughlin; Third street, Pittsburgh.
H. B. Hays & Brother, 144 Water street, Pittsburgh.
Joseph Walton & Co., Water street, Pittsburgh.
J. D. Richer, Hope Church Post Office.
Redman & Faucett, Water street, Pittsburgh.
William H. Brown's Heirs, Water street, Pittsburgh.
Willian Neel, McKeesport.
William Stone's Heirs, McKeesport.
J. C. Risher, 160 First avenue, Pittsburgh.
George Lysle & Sons, McKeesport.
Whigham Bailey & Co., McKeesport.
Gulp & Gamble, Coal Valley Post Office.
Wood Lynn & Co., Coal Valley Post Office.
Foster, Wood & Clark, Coal Valley Post Office.
Robbins & Jenkins, McKeesport.
Gumbert & Huey, McKeesport.
Wood, Scrader & Co., Elizabeth.
Horner & Roberts, Elizabeth.
O'Neil & Co., Elizabeth.
G. & W. Jones, 10 Smithfield street, Pittsburgh.
Skelton & Co., Elizabeth.
Robbins, Linn & Co , Sunny Side Post Office.
Lynch & Robinson, Water street, Pittsburgh.
James O'Neil, Boston Post Office.
Osceola Coal Company, Greenoak Post Office.
Ashville Coal Company, Greenoak Post Office.
Hampton Coal Company, Williamsburg.
Duquesne Coal Company, 358 Penn avenue, Pittsburgh.
Waverly Coal Company, Wood street, Pittsburgh.

New York and Cleveland Gas Coal Company, 89 Wood st., Pittsburgh.
M. Graver & Co., limited, Duquesne way, Pittsburgh.
J. W. Doak, Whiteash Post Office.

Name and Address of Operators of Mines Located in Westmoreland County.

Westmoreland Coal Company, Irwin station.
Penn Gas Coal Company, Irwin station.
Youghiogheny Coal Hollow Coal Company, Youghiogheny Post Office.
C. H. Armstrong, Armstrong station.
W. L. Scott, Sutersville Post Office.
Robert H. Powel & Co., Sutersville Post office.
C. P. Markle & Co., West Newton.
F. J. Anspack, West Newton.
Waverly Coal Company, Wood street, Pittsburgh.
Fox, Kiffer & Co., Jacobs creek.
Greensburg Coal Company, Greensburgh.
South-west Coal Company, Tarr station.
Hurst, Stoner & Co., Stonerville.
Dillinger & Suttle, Scottdale.
A. C. Overholt, West Overton.
Markle & Co., West Overton.
John M. Cochran, Stauffer station.
M. Mullen, Mt. Pleasant.
Boyle & Hazlett, Mt. Pleasant.
Duncan Brothers, Mt. Pleasant.
M. Saxman, junior, & Co., Latrobe.
Loyalhanna Coal and Coke Company, Latrobe.
Shafton Coal Company, Irwin station.
Millwood Coal and Coke Company, Millwood station.
Isabella Coke Company, Cokeville.
Saltsburg Coal Company, Saltsburg, Indiana county.
Apollo Iron Company, Apollo, Armstrong county.
Leechburg Coal Company, Leechburg, Armstrong county.
Jacob Tomer, Webster.
John Gilmore, Webster.
William C. Guffy, Webster.
Lynch & Robinson, Webster.
Phillips & Nettenzsway, South side, Pittsburgh.
William Clark, Water street, Pittsburgh.
Noah Speers, Bellevernon.
Schmertz & Co., Bellevernon.
George W. Clarke, Bellevernon.

Names and address of Operators of Mines located in Fayette county.

Frazer & Fry, Fayette City.
James Rutherford, Fayette City.
Turnbull & Hall, Fayette City.
Daniel Bostner & Co., Fayette City.
Troy & Wellington, Fayette City.
Cochran & Kester, Dawson station.
Brown & Cochran, Dawson station
Jackson Mines Company, Dawson station.
H. C. Frick & Co., Broadford.
Markle, Sherrick & Co., Broadford.

A. Hutchinson & Bro., Broadford.
James Cochran, Dawson station.
Sherrick & Co., Broadford.
Laughlin & Co., Broadford.
Cochran Bros., Broadford.
C. H. Armstrong & Son, Armstrong, Westmoreland county.
Everson, Macrum & Co., Scottdale, Westmoreland county.
Henderson & Taylor, Scottdale, Westmoreland county.
Fox, Kiffer & Co., Jacobs' creek, Westmoreland county.
J. R. Stauffer, Scottdale, Westmoreland county.
Samel White, Connellsville.
A. H. Sherrick, Pennsville.
Zuck & Henry, Connellsville.
Pittsburgh and Connellsville Gas Coal and Coke Company, 83 Wood street, Pittsburgh.
Connellsville Gas Coal Company, Connellsville.
Reid Bros., Dunbar.
Mahoning Coal and Coke Company, Dunbar.
Dunbar Furnace Company, Dunbar.
Colvin & Torrence, Mount Braddock.
Ewing, Hanna & Co., Lamont furnace.
Coatsworth & Underwood, California, Washington county.
Crowthers, Musgrave & Co., California, Washington county.
Morgan & Dixon, California, Washington county.
Joseph Garrow, California, Washington county.
A. L. Abrams, Brownsville, Fayette county.
Adams, Jacobs & Co.
Beall & Ewing, Watsontown Post Office, Fayette county.

Name and Address of Operators of Mines located in Washington County,

T. B. Robbins & Co., Midway.
Taylor, Ulph & Co., Midway.
Alexander Patterson, Mansfield Valley.
J. Allison, Washington.
V. Harding, Washington.
Blackbnrn & Nort, Coal Bluff Post Office.
Gamble & Risher, Dravosburg, Allegheny county.
Scully & Co., Coal Bluff Post Office.
Patterson & Co., Mansfield Valley, Allegheny county.
William B. Huston, Coal Bluff Post Office.
John G. Langner & Co., Sennca street, Buffalo, New York.
Craig Brothers, Coal Bluff Post Office.
Byers & Co. Monongahela City.
Thomas S. Hutchinson, Monongahela City.
Lindsey & McCutcheson, Allegheny City.
Louis Staib, Monongahela City.
H. Warne & Co., Monongahela City.
Abe, Hays & Co., Monongahela City.
Richard Stockdale, Monongahela City.
W. H. Brown's heirs, Water steeet, Pittsburgh.
George W. Clark, Bellevernon, Fayette county.
Williams & Bell, Woods' Run Post Office.
Thomas J. Woods, Woods' Run Post Office.
George Joll ff, California.

Caledonia Coal Company, Woods Run Post Office.
William C. Smith & Co., Pike Run Post Office.
Hope Coal Company, Pike Run Post Office.
Robert J. Gregg, Pike Run Post Office.
J. S. Neel, California.
Knob Coal Company, West Brownsville.
Kent Johnson & Co.

Names and Address of Operators of Mines located in Somerset county.

Buffalo Coal and Iron Company, Garrett station.
Reeder & Co., Garret station.
J. J. Hoblitzell, Keystone junction.
Keystone Coal Company, Keystone junction.
Cumberland and Elklick Coal Company, Myersdale.
Thomas S. Williams, Myersdale.
Samuel Adams, Berlin.
Thomas Rees, Berlin.

Names and Address of Operators of Mines located in Bedford county.

Sandy Run Coal Company, Hopewell.
Kimble Coal and Iron Company, Riddlesburg.
R. B. Wighton, Riddlesburg.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

Name of Colliery.	Name of Operator.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Shafton,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Green Springs,	Redman & Fawcett,	Bituminous,	Drift,	. .	1	35
Enterprise,	V. Harding,	Bituminous,	Shaft,	1	1	30
Enterprise,	O'Neil & Co.,	Bituminous,	Drift,	. .	. .	. .
	James O'Neil,	Bituminous,	Drift,	. .	. .	. .
Buckeye,	James M. Cochran,	Bituminous,	Drift,	1	. .	. .
South Side,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Larimer,	Westmoreland Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Company,	Bituminous,	Slope,	1	2	. .
Midway Mine,	Taylor, Ulp & Co.,	Bituminous,	Drift,	2	1	20
Chess Mine,	Gray & Bell,	Bituminous,	Drift,	. .	3	70
Venture Mine,	Gray & Bell,	Bituminous,	Drift,	. .	1	30
Coalridge Mine,	Gray & Bell,	Bituminous,	Drift,	. .	1	12
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	. .
Oak Ridge,	Oak Ridge Coal Co., (limited,)	Bituminous,	Drift,	. .	. .	. .
Homer & Roberts,	Homer & Roberts,	Bituminous,	Drift,	2	. .	. .
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Old Eagle,	W. H. Brown,	Bituminous,	Drift,	. .	. .	. .
Penn Gas Coal Company,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Shaft, No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	. .	. .	. .
Shaft, No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Beck Run,	H. B. Hays & Bro.,	Bituminous,	Drift,	2	. .	. .
Six-Mile Ferry,		Bituminous,	Drift,	. .	. .	. .
Six-Mile Ferry, No. 1,		Bituminous,	Drift,	. .	1	10
Cornell & Werling,	W. H. Brown's Heirs,	Bituminous,	Drift,	2	5	. .
Streets Run,	I. D. Risher,	Bituminous,	Drift,	. .	. .	. .
Black Diamond,	W. H. Brown,	Bituminous,	Drift,	. .	. .	. .
Fort Pitt,	Fort Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .
Hampton,	Hampton Coal Company,	Bituminous,	Drift,	. .	. .	. .
Mansfield C. and C. Co.,		Bituminous,	Drift,	. .	1	12
Millwood C. and C. Co.,		Bituminous,	Shaft & slope,	1	1	. .
Enterprise,	Hartley & Masshall,	Bituminous,	Drift,	1	1	20
Bower Hill,	A. J. Schults,	Bituminous,	Drift,	. .	. .	. .
White Ball,	Yough. Coal Hollow Coal Co.,	Bituminous,	Drift,	1	. .	. .
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	1	. .	. .
Allison's,	Jonathan Allison,	Bituminous,	Drift,	. .	. .	. .
Summit Mine,	James Cochran & Co.,	Bituminous,	Drift,	. .	. .	. .
Mansfield C. and C. Co.,	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	. .	1	12
Amity Mine,	J. C. Risher,	Bituminous,	Drift,	. .	. .	. .
Carondulet,	Frazer & Frye,	Bituminous,	Drift,	. .	. .	. .
	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of January, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
4	43	8	6	57	4	. .	2,761	. .	6x7⅛	280	12,600	250	11,250	260	11,700	275	12,375
2	112	6	22	134	8	. .	. . . .	4	42								
1	22	. .	3	25	. .	. .	880	2	22	400	9,000	247	5,557	193	4,243	341	7,672
. .	134	10	28	172	19	1	5,690										
. .	96	25	18	139	7	. .	5,575	4									
1	15	. .	4	19	3	1	3,100	2	48								
. .	207	20	25	252	17	. .	14,050	. .	. . .	. . .	. . . .	. . .	. . . .	. . .	30,700		
. .	56	5	7	68	5	. .	4,516										
3	114	10	16	140	. .	. .	9,921	. .	. . .	. . .	. . . .	. . .	. . . .	. .	54,800	. .	33,000
2	45	5	13	63	3	1	1,300	2	40	100	4,000						
6	98	25	45	168	10	. .	8,732	1	35	. . .	. . . .	170	6,060	160	5,760		
1	65	10	18	93	6	. .	2,515	1	40	. . .	. . . .	. . .	. . . .	147	5,760		
								2	15								
1	54	6	13	73	5	. .	2,223	1	48	. . .	. . . .	. . .	. . . .	1,095	5,256	131	6,288
								2	32	. . .	. . . .	. . .	. . . .	. .	1,600	. . .	3,040
														250	6,8[illegible]6	295	9,328
1	126	9	13	148	8	2	4,630										
. .	65	. .	11	76	5												
1	210	. .	40	250	15	1	4,000	2	54	500	27,000	. . .	. . . .	. . .	. . . .	550	29,700
. .	17	. .	5	22	1	1	640	2	45								
. .	41	8	7	63	3	. .	1,644	4	39	265	10,335	365	13,235	310	12,090	260	10,140
. .	200	20	55	275	13	3	. . . .	3	106¼	440	21,000	440	24,000	440	24,000	410	24,000
. .	185	20	36	241	14	.	. . . .	. .	31⅛	205	6,500	265	6,500	400	12,600	400	12,600
									28½	170	4,800	170	4,800	140	3,900	140	3,900
									39⅛	200	7,950	200	7,950	130	4,950	130	4,950
. .	230	5	37	272·	12												
2	142	. .	53	195	14	2	9,872	10	52								
. .	115	. .	26	141	8	. .	4,444	3	52								
. .	136	. .	38	174	7	1	4,197	6	72								
4	180	20	35	235	9	1	8,534	4	40⅛								
. .	114	16	10	140	2	5											
. .	84	. .	12	96	6	1	3,518	4	59	215	20,799	215	21,030	230	32,204	230	23,204
									46⅛	. . .	. . . .	. . .	. . . .	290	. . .	290	
. .	50	1	12	63	5	1	800	3	42	25	1,054	30	1,260	25	1,050	30	1,260
. .	100	8	15	123	8	. .	5,474										
1	75	10	22	107	6	2	1,511	13	48								
6	55	4	12	71	13	. .	. . . .	. .	51	400	20,000	. . .	. . . .	. . .	. . . .	. . .	20,000
2	99	6	8	114	6	. .	3,500	2	45	230	10,250	255	11,475	250	11,250	280	12,600
. .	20	2	5	27	2	1	1,000	3	60								
2	. . .	. .	. . .	. .	.	. .	. .	3	64	160	10,240						
1	15	4	. . .	19	3	1	3,248	2	64								
. .	30	5	11	46	2	1	868	4	48	6,000	6,000	. . .	5,800				
. .	22	. .	3	25	2	. .	5,338	2	56	120	6,000						
1	81	7	21	109	6	2	352	13	48								
. .	73	7	30	220	13	4	7,230	4	56								
. .	71	. .	11	82	4	1	2,977										
. .	25	. .	3	28	2	. .	1,000	2	42								

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Shafton,	266¼	....	55	2,475	70	3,675	75	3,937	80	4,200
			65	3,412	90	4,050	90	4,050	100	4,500
			55	2,475	45	1,620	50	1,800	50	1,800
			50	1,800						
Green Springs,	....	....	....	....	....	....	....	....	....	....
Enterprise,	293	218	301	7,521	178	4,450	81	2,025	217	5,425
Enterprise,	....	....	....	....	....	....	....	....	....	....
James O'Neil,	....	....	....	....	....	....	....	....	....	....
Buckeye,	....	....	....	....	....	....	....	....	....	....
South Side,	....	....	....	....	....	....	....	....	....	5,000
										1,000
										13,000
Larimer,	....	....	....	11,500	....	....	13,000	....	....	14,400
Foster Slope,	....	....	....	12,000	....	13,400	....	....	....	....
Midway Mine,	100	....	....	....	....	....	....	....	....	....
Chess Mine,	165	....	....	....	75	2,700	70	2,520	....	....
Venture Mine,	....	22½	....	....	....	....	90	2,050	....	....
Coal Ridge Mine,	120	...	....			....	92	3,542	134	4,690
	72½									
Pine Run,	....	....	....	....	....	....	....	....	....	....
Oak Ridge,	....	....	....	....	....	....	....	....	....	....
Homer & Roberts,	27,625	512	300	14,400	300	14,400	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Old Eagle,	11,447	....	....	....	....	....	....	....	....	....
Penn Gas Coal Company,	...	....	500	24,000	500	24,000	500	24,000	550	24,000
Shaft, No. 1,	....	....	420	18,500	420	18,500	430	19,000	430	19,000
Shaft, No. 4,	....	....	....	....	....	....	....	....	....	....
Beck Run,	....	....	....	....	....	....	....	....	....	....
Six-Mile Ferry,	....	....	....	....	....	....	....	....	....	....
Six-Mile Ferry, No. 1,	....	....	....	....	....	....	....	....	....	....
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Streets Run,	....	....	....	....	....	....	....	....	....	....
Black Diamond,	22,059¼	....	...	....	140	6,160	230	11,211	230	11,211
Fort Pitt,	....	28	....	....	....	....	....	....	....	....
Hampton,	....	..	....	....	....	....	....	....	....	....
Mansfield Coal and Coke Co.	....	....	....	....	....	....	....	....	....	....
Millwood Coal and Coke Co.	....	..	350	14,000	....	....	....	....	....	....
Enterprise,	11,393	30	6,150	265	7,860	257	7,710	295	7,850	8,400
Bower Hill,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	....	7,800	....	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Allison's,	....	....	....	3,500	....	3,000	....	....	....	....
Summit Mine,	....	120	....	....	....	....	....	....	....	....
Mansfield Coal and Coke Co.	....	....	....	....	....	....	....	....	....	....
Amity Mine,	....	....	....	....	....	....	....	....	....	....
Caroudulet,	....	....	....	....	....	....	....	....	....	....
Thomas Fox,	....	....	....	....	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
21	22	23	24	25	26	27	28	29	30	31	
218¾	7x14	145	14,210	125	12,250	130	12,740	140	13,720	13,280	Westmoreland county.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
191	20	252	5,040	149	2,980	65	1,300	202	4,040	3,340	Washington county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	35,700	. . .	36,000	. . .	. . . .	. . .	28,500	. . . .	Westmoreland county.
. . . .	. . .	. .	27,000	. . .	23,400	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	17,160	. . .	19,500	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
100	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	400	Washington county.
72¼	35	. . .	. . .	225	7,875	165	5,775	. . .	. . . .	6,825	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	145	3,915	. . .	. . . .	. . .	Allegheny county.
113	53	. . .	. . . .	. . .	. . . .	205	10,885	271	14,263	12,574	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	48	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	20	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	42	490	20,580	510	21,420	500	21,000	480	20,160	20,790	Allegheny county.
. . . .	40	600	24,000	600	24,000	600	24,000	600	24,000	. . .	Westmoreland county.
. . . .	39	450	17,550	465	18,000	465	18,000	480	18,700	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	50	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	45	510	22,950	510	22,950	590	26,550	590	26,550	24,750	Washington county.
. . . .	. . .	. .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	48	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
14,000	. . .	300	12,000	. . .	. . . .	. . .	. . . .	. . .	. . . .	12,000	Westmoreland county.
7,392	40	320	12,800	335	13,400	340	13,600	345	13,800	13,300	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	Allegheny county.
. . . .	25	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	49	. . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Washington county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Fayette county.
. . . .	48	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Fayette county.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Victor Deloche, ...	53	Married, . .	. . . .	January 23,	January 24,
Adam Schade, ...	13	. . . . . .	. . .	January 23,	January 24,
Reuben Cook, ...	47	Married, . .	. . . .	January 28,	January 30,

I find that Victor Deloche, who was killed January 23, was working with his son, a boy of 13, and neglected to set up sufficient timber to secure his working-place. He had told the little son not to go under the slate, as it was dangerous. Went under it himself, with the above result. No blame is attached to any one. Inquest held by coroner's jury. Verdict, accidental.

Adam Schade, who was killed January 23, at Camp Hill mines, was working with his father, who had set him to work cutting some bottom coal. The slate fell down, killing him instantly. Inquest by coroner and jury, which found a verdict of accidental death.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of January, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed by falling slate, ...	Victor Deloche was working with his son, at the Laurel Hill mine, N. P. Rand & Co., Allegheny county, when the slate fell on him, instantly killing him.
Killed by falling slate, ...	Adam Schade was working with his father, at Camp Hill mines, David Steen & Sons, Allegheny county, when the slate fell on him, instantly killing him.
Killed by falling slate, ...	Renben Cook was working near his son, at the Foster slope, Penn Station, Westmoreland Coal Company, Westmoreland county; had just loaded his wagon when the slate came down, killing him instantly.

Renben Cook, who was killed January 28, at the Foster slope, Penn Station, Westmoreland county, was working near his son. Had just loaded his wagon when the slate fell on him. Verdict of the coroner's jury was, that the aforesaid deceased came to his death by slate falling on him from the roof, by neglect of said Renben Cook, in not removing the slate before working under it; and further, we exonerate the superintendent and foreman of said mine from all blame as to the cause of said Reuben Cook's death.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Corry's Mines,	Corry & Co.,	Bituminous,	Drift,	. .	. .	. .
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .		. .
Old Eagle Mines,	W. H. Brown's Heirs,	Bituminous,	Drift,	. .	. .	. .
Youghiogheny Mines,	James O'Neil,	Bituminous,	Drift,	. .	. .	. .
Waverly Mines,	Waverly Coal and Coke Company	Bituminous,	Drift,	. .	. .	. .
Enterprise,	O'Neil & Co.,	Bituminous,	Drift,	. .	. .	. .
Sable Mines,	Sable Coal Company,	Bituminous,	Drift,		. .	. .
Spring Grove,	Cochran & Kester,	Bituminous,	Drift,	. .	. .	. .
Allison Mines,	J. Allison,	Bituminous,	Drift,	. .	. .	. .
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	. .
Jackson Mines,	J. F. Cochran,	Bituminous,	Drift,	. .	. .	. .
Hampton Mines,	John McIntyre,	Bituminous,	Drift,	. .	. .	. .
Pittsburgh Union,	Huntsman, Miller & Co.,	Bituminous,	Drift,	. .	. .	. .
Street's Run,	T. D. Risher,	Bituminous,	Drift,	. .	. .	. .
Green Springs,	Redman & Fawcett,	Bituminous,	Drift,	. .	1	35
Iron City Mines,	Phillips & Mittenzuay,	Bituminous.	Drift,	2	.	. .
Armstrong's Mines,	Charles H. Armstrong,	Bituminous,	Drift,	. .	. .	. .
	Lewis Staib,	Bituminous,	Drift,	. .	. .	. .
Pittsb'h & Conn. G. C. Co	Pittsb'h & Conn. Gas Coal Co.,	Bituminous,	Slope,	3	4	. .
Corey Mines,	J. B. Corey,	Bituminous,	Drift,	. .		. .
Sandy Run Mines,	Langdon & Morley,	Semi-bitum.	Drift,	. .	. .	. .
Enterprise Mines,	V. Harding,	Bituminous,	Shaft,	1	1	30
Cornell & Werling,	W. H. Brown's Heirs,	Bituminous,	Drift,	2	5	. .
Enterprise Mines,	Hartley & Marshall,	Bituminous,	Slope,	1	1	40
Millwood Co. Mines,	Millwood Coal and Coke Company	Bituminous,	Shaft & slope,	1	1	. .
Harlew Mines,	Lewis Staib,	Bituminous,	Drift,	. .	. .	. .
Catsburgh Mines,	Lewis Staib,	Bituminous,	Drift,	1	. .	. .
Keystone Mines,	Keystone M. Company,	Bituminous,	Drift,	. .	. .	. .
Little Alps,	Crawthers, Musgrave & Co.,	Bituminous,	Drift,	. .	. .	. .
Black Diamond,	W. H. Brown's Heirs,	Bituminous,	Drift,	. .	. .	. .
Bigley Mines,	Alps Coal Company,	Bituminous,	Drift,	. .	.	. .
Fort Pitt Mines,	Fort Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .
Shafton Mines,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Red Hot,	Strickler & Lane,	Bituminous,	Drift,	. .	. .	. .
Larimer, No. 1,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Spring Hill Mines,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
South Side Mines,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	.	. .
Coal Ridge,	Gray & Bell,	Bituminous,	Drift,	. .	1	. .
Venture Mine,	Gray & Bell,	Bituminous,	Drift,	. .	1	. .
Chess Mine,	Gray & Bell,	Bituminous,	Drift,	. .	3	. .
Shaft No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft & slope,	1	1	. .
No. 4,	Pennsylvania Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Six Mile Ferry, No. 7,	H. B. Hays & Brother,	Bituminous,	Drift,	. .	1	10
Six Mile Ferry, No. 2,	H. B. Hays & Brother,	Bituminous,	Drift,	. .	. .	. .
Beek's Run Mine,	H. B. Hays & Brother,	Bituminous,	Drift,	2	. .	. .
P. & C. G. C. & C. Co.,	Pitts. & Conn. Gas Coal & Coke Co.	Bituminous,	Slope & shaft,	4	4	. .
Oak Ridge Coal Company	Oak Ridge Coal Co., (limited,)	Bituminous,	Drift,	. .	. .	. .
Camden Mine,	George Lysle & Sons,	Bituminous,	Drift,	. .	. .	. .
	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .
White Ball,	Yough. Coal Hollow Coal Co.,	Bituminous,	Drift,	1	. .	. .
	Hays & Hutchinson,	Bituminous,	Drift,	1	. .	. .
	Loyalhanna Coal and Coke Co.,	Bituminous,	Slope & shaft,	. .	1	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of February, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Ventilation. Number of openings.	Ventilation. Inlet—size of feet.	Ventilation. 1st week. Velocity of air current per minute at inlet.	Ventilation. 1st week. Number of cubic feet passing in per minute at inlet.	Ventilation. 2d week. Velocity of air current per minute at inlet.	Ventilation. 2d week. Number of cubic feet passing in per minute at inlet.	Ventilation. 3d week. Velocity of air current per minute at inlet.	Ventilation. 3d week. Number of cubic feet passing in per minute at inlet.	Ventilation. 4th week. Velocity of air current per minute at inlet.	Ventilation. 4th week. Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
.	50	5	6	61	9	. .	4,000	5	96	100	9,600						
. .	20	. .	5	25	1	1	840	2	42								
. .	46	8	7	61	3	. .	2,363	4	39	360	14,040	340	13,260	350	13,650	360	14,040
. .	160	20	20	140	5	. .	3,000	5									
. .	40	3	5	48	5	. .	3,200	3	56	250	13,000						
. .	134	10	28	172	19	1	5,334										
. .	42	9	4	57	4	3	2,500	7	97	56	5,420	60	5,860	62½	6,075	63	6,150
. .	21	. .	4	28	3	1	4,000	5	56								
. .	18	. .	7	25	1	1	400	4	72	.	. . .	115	6,054				
8	141	11	13	165	8	2	5,400										
. .	20	. .	4	24	3	3	4,740	3	48								
.	115	8	18	141	8	8	7,120										
. .	31	3	7	41	4	1	120	3									
. .	120	16	11	147	2	5	4,000										
2	112	6	22	134	8	. .	. . .	4	56	320	17,980	275	15,420	276	12,640	266	14,940
2	62	4	10	76	3	3	2,000	2									
.	86	15	18	119	9	. .	1,934	5									
. .	36	. .	5	41	3	. .	1,521	3	54	. . .	. . . .	300	16,200	350	18,900	400	21,600
7	80	2	100	182	5	5	14,308	2	64	173	10,182	175	11,746	234	13,104	175	13,440
. .	50	5	6	61	10	. .	4,000	6	100								
.	48	5	. .	53	5	. .	2,000	2	48	100	4,800	100	4,800	100	4,800	120	5,760
1	20	. .	3	23		. .	720	2	20	193	3,840	292	5,840	292	5,840	232	4,640
4	180	20	35	235	9	1	7,407	4	40½								
2	90	6	15	111	6	. .	4,040	3	45	300	1,250	320	14,400	310	13,950	305	13,725
6	70	5	12	87	7	. .	. . . .	. .	51	400	20,000	400	20,000				
. .	56	9	8	73	5	. .	3,167	3	60	. . .	. . . .	150	9,000	175	10,500	200	12,000
. .	68	6	16	90	7	5	2,844	3	48	. .	. . .	150	7,200	175	8,400	200	9,600
. .	90	. .	15	105	9	. .	6,000	3	72	. .	. . . . .	. . .	. . . . .	. .	. . .	275	19,800
																300	21,600
. .	87	20	8	115	3	1	4,391										
. .	85	. .	12	97	7	1	3,954	4	43	85	21,866	230	23,217	330	24,953	330	15,307
									40½	410	. . . .	290	. . . .	190			
. .	46	8	14	68	6	. .	2,186										
. .	60	2	14	76	7	1	139	42	42	30	1,260	30	1,260	25	1,050	20	840
4	46	8	6	60	4	.	1,730	. .	45	240	10,800	270	12,150	260	11,700	270	12,150
. .	10	. .	1	11	2	1	2,088										
. .	60	2	7	69	5	. .	5,061										
. .	25	5	2	32	. .	. .	2,406										
. .	111	10	16	138	. .	. .	11,010										
. .	120	. .	20	140	. .	. .	8,416										
1	46	5	12	63	5	. .	1,361	3	52½	193	10,132	. . .	. . . .	149	7,882	186	8,928
1	68	10	12	90	6	. .	1,635										
6	97	24	43	164	12	. .	8,232	2	36¾	107	3,992	93	3,324	92	3,189		
3	186	20	36	242	14	. .	. . . . .	2	31½	210	6,550	215	6,775	210	6,550	215	6,775
									28⅓	170	4,800	180	5,100	170	4,800	180	5,100
									39½	190	8,000	205	8,100	190	8,000	205	8,100
. .	228	5	37	270	12	. .	. . . . .	2	74	180	3,320	180	13,320	190	14,360	190	14,360
									13	300	3,900	300	3,900	320	4,160	320	4,160
									13	300	3,900	300	3,900	320	4,160	320	4,160
. .	135	. .	32	167	6	1	7,106	6	72								
. .	118	. .	21	139	7	. .	7,069	3	42								
2	158	. .	41	199	13	2	12,285	10	52								
7	78	. .	105	183	5	5	12,160	. .	64	200	19,800	200	16,440	250	24,650	225	22,225
. .	60	. .	10	70	5												
. .	124	4	23	151	12	. .	4,178	8	48	135	6,480	130	6,240	115	5,220	140	6,720
. .	25	. .	3	2	2	. .	971	. .	42								
1	.	. .	. .		. .	. .	. . . . .	3	56	110							
1	30	2	1	35	3	1	. . . . .	3	33	150	4,950						
. .	. . .	. .	. . .	. . .	. .	. .	. . . . .	2	48	750	36,000	800	38,400	700	33,600	730	35,040

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Turtle Creek, No. 3, . . .	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift, ...	. .	.	.
Turtle Creek, No. 4, . . .	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift, ...	. .	. .	. .
Keystone Mines, No. 1, .	Wm. H. Brown's Heirs, ...	Bituminous,	Drift, ...	. .	. .	. .
Keystone, No. 2, . . .	Wm. H. Brown's Heirs, ...	Bituminous,	Drift, ...	. .	. .	. .
Sommerhill, ...	A. G. Negley & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Morgan Mine, ...	H. C. Frick & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Globe Mine, ...	A. A. Hutchinson, ...	Bituminous,	Drift, ...	. .	. .	. .
Eagle Mine, ...	Markle, Sherreck & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Summit Mine, ...	James Cochran & Co., ...	Bituminous,	Drift, ...	.	. .	. .

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	. . .	. .	. . .	. . .	. .	. .	. . . .	3	49	205	10,045						
. .	. . .	. .	. . .	. .	. .	. .	. . . .	6	18	390	7,020						
. .	225	35	40	300	15	. .	. . . .	9	44	120	5,280						
.	75	10	18	103	10	. .	. . . .	10	46	155	2,130						
. .	27	3	4	34	1	. .	. . . .	2	40	80	3,200						
. .	35	2	5	42	4	. .	. . . .	2	50								
. .	21	2	4	27	3	. .	. . . .	2									
. .	21	6	4	31	3	2	. . . .	3	33	310	10,230						
. .	22	. .	5	27	3	. .	. . .	3	52	140	7,280						

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute pass-ing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Corry's Mines,	9,600	....	..	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Old Eagle Mines,	252	....	....	..	....	....	....	....	....	....
Youghiogheny Mines,	..	....	..	....	....	....	....	....	....	....
Waverly Mines,	....	....	300	....	....	....	....	....	....	....
Enterprise,	....	....	....	....	....	....	....	....	....	....
Sable Mines,	....	....	....	....	....	....	....		....	....
Spring Grove,	....	....	....	....	....	....	....	....	....	....
Allison Mines,	....	....	....	....	....	....	....	....	....	....
Pine Run,	....	....	....	....	....	....	....	....	....	....
Jackson Mines,	....	....	....	....	....	....	....	....	....	....
Hampton Mines,	....	....	....	....	....	....	....	....	....	....
Pittsburgh Union,	....	....	....	....	....	....	....	....	....	....
Street's Run,	....	....	....	....	....	....	....	....	....	....
Green Springs,	....	....	....	....	....	..	....	....	....	....
Iron City Mines,	....	....	....	....	....	....	....	....	....	....
Armstrong's Mines,	....	....	....	....	....	....	....	....	....	....
Lewis Staib,	....	....	....	....	....	....	....	....	....	....
Pittsb'h & Conn. Gas Coal Co	189¼	....	173	10,182	175	11,746	234	13,104	175	13,440
Corey Mines,	....	....	....	....	....	....	....	....	....	....
Sandy Run Mines,	5,280	240	260	4,160	260	4,160	....	..	265	4,240
Enterprise Mines,	252	199	130	3,350	247	6,175	217	5,425	202	5,050
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Enterprise Mines,	312⅔ 1,364¾	....	200	8,000	185	7,200	225	10,000	190	76,000
Millwood Company Mines,	....	....	300	14,000	300	14,000	...	....	....	....
Harlew Mines,	....	....	....	....	....	....	....	....	....	....
Catsburgh Mines,	....	....	....	....	....	....	....	..	....	....
Keystone Mines,	....	....	....	....	....	....	....	....	125	9,000
Little Alps,	....	....	....	....	....	....	....	....	....	....
Black Diamond,	....	....	210	9,213¾	230	11,212	195	9,506	....	7,106
Bigley Mines,	....	..	....	....	....	....	....	....	....	....
Fort Pitt Mines,	....	....	....	....	....	....	....	....	....	....
Shafton Mines,	260	195	200	9,000	200	9,000	190	8,550	190	8,550
Red Hot,	....	....	....	....	....	....	....	....	....	....
Larimer. No. 1,	....	....	....	....	....	....	....	....	....	....
Spring Hill Mines,	....	....	....	....	....	....	....	....	....	....
Foster Slope,	....	....	....	21,350	....	18,000	....	....	....	....
South Side Mines,	....	....	....	16,000	....	14,500	...	15,000	....	15,300
Coal Ridge,	....	....	....	....	....	....	88	3,740	36	1,224
Venture Mine,	....	....	....	....	....	....	....	....	....	....
Chess Mine,	97	62	63	3,000	59	2,189	60	2,835	...	...
Shaft No. 1,	....	....	400	19,000	395	20,000	405	19,000	400	20,000
No. 4,	....	....	410	21,000	430	21,000	470	23,600	465	23.700
Six Mile Ferry, No. 7,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 2,	....	....	....	....	....	....	....	....	....	....
Beck's Run Mine,	....	....	....	....	....	....	....	....	....	....
P. & C. G. C. & C. Co.,	218¾	..	200	19,800	200	16,440	250	24,600	225	22,225
Oak Ridge Coal Company,	....	....	....	....	....	....	....	....	....	....
Camden Mine,	130	130	55	1,925	52	1,760	56	1,940	54	1,890
Thomas Fox,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	....	....	....	....	....	....	....	....
Hays & Hutchinson,	....	....	1,000	4,050	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK		4TH WEEK.			
Average velocity per minute for the month.	Outlet-size of-feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
21	22	23	24	25	26	27	28	29	30	31	
. . . .	100	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	16	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	42	520	21,840	500	20,000	510	21,420	520	21,840	21,275	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	64	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. .	178	26	3,010	36	4,250	25½	3,020	37	4,400	. . . .	Allegheny county.
. . . .	56	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Fayette county.
. . . .	40	. . .	. . . .	50	2,400	. . .	. . .	. . .	. . . .	. . . .	Washington county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	45	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Fayette county.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . . .		. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Allegheny county.
. . .	56	274	15,112	310	17.020	275	12,512	407	22,875	. . . .	Allegheny county.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .		. . .	. . . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	48	. . .	. . . .	150	7,200	175	8,400	200	9,600	15,600	Wes moreland county.
189¼	16	173	10,182	175	11,746	234	13,104	175	13,440	189¼	Fayette county.
	64										
. . . .	200	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	Allegheny county.
4,200	16	500	8,000	500	8,000	. . .	.	575	8,250	8,126	Bedford county.
199	16	77	1,232	158	2,528	138	2,208	207	3,312	2,320	Washington county.
. . . .	50	. .	. . . .	.	. . . .		. . . .	. . .	. . .	. . . .	Allegheny county.
200	50	315	15,750	320	16,000	305	15,250	320	165,000	317¾	Allegheny county.
. . . .	36	200	20,000	200	20,000	. .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	25	. . .	. . . .	600	15,000	700	17,500	800	20,000	16,000	Washington county.
. . . .	54	. . .	. . . .	300	16,200	350	18,900	400	21,600	15,100	Washington county.
. . . .	72	. . .	. . . .	. . .	. . . .	. . .	. . . .	200	14,400	. . . .	Somerset county.
. .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . . .	Fayette county.
. . .	45	616	27,450	590	26,550	560	25,200	350	15,750	. . . .	Washington county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	.	. . .	. . . .	. . . .	Allegheny county.
. . . .	24	105	2,500	145	2,500	100	2,400	100	2,400	.	Allegheny county.
195	94	120	11,760	135	13,230	130	12,740	135	13,230	12,740	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . .	. . .	. .	. . .	.	. . .	Fayette county.
. . . .	. . .	. . .	15,300	. . .	9,700	. . .	14,000	. . .	8,300	. . . .	Westmoreland county.
. . . .	. . .	. . .	2,000	. . .	. . . .	. . .	5,000	. . .	5,500	. . . .	Westmoreland county.
			4,000	. . .	. . . .	. . .	5,250	. .	8,000		
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	27,000	. . .	. . . .	. . . .	Westmoreland county.
. . . .	. .	. .	31,000	. . .	29,300	. . .	30,200	. . .	31,000	. . . .	Westmoreland county.
62	53	260	13,780	. . .	. . . .	198	10,395	362	19,186	14,440	Allegheny county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . .	40	145	5,800	145	5,800	148	5,920	. . .	.	5,840	Allegheny county.
. . . .	47⅙	400	19,000	405	20,000	384	19,000	405	20,000	. . .	Westmoreland county.
	49½										
. . . .	49	429	21,000	429	21,000	480	23,520	480	23,520	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	.	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
218¾	64	200	19,800	200	15,026	200	19,400	200	19,800	200	Fayette county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
54¼	25	70	1,750	68	1,700	65	1,625	72	1,800	68¾	Allegheny county.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	Allegheny county.
. . . .	36	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Westmoreland county.
. . . .	33	155	5,111	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Washington county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Loyalhanna Coal & Coke Co.	....	....	....	....	....	....	....	....	....	....
Turtle Creek, No. 3,	....	....	....	....	....	....	....	....	....	....
Turtle Creek, No. 4,	....	....	80	2,800	....	....	....	....	....	....
Keystone Mines, No. 1,	....	....	....	....	....	....	....	....	....	....
Keystone, No. 2,	....	....	90	3,400	....	....	....	....	....	....
Sommerhill,	....	....	....	....	....	....	....	....	....	....
Morgan Mine,	....	.	190	3,750	....	....	....	....	....	....
Globe Mine,	....	....	190	3,750	....	....	....	....	....	....
Eagle Mine,	....	....	140	8,680	....	....	....	....	....	....
Summit Mine,	....	....	246	5,280	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	. .	300	27,000	300	27,000	. . .	. . . .	. . .	. . . .	. . .	Westmoreland county.
. . . .	47	385	18,095	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	35	115	4,025	. . .	. . . .	. .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	24	230	5,320	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	21	240	5,040	. . .	. . . .	. . .	. . . .	. . .	. . .	. . . .	Allegheny county.
. .	30	140	4,200	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Allegheny county.
. . . .	45	40	1,800	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Fayette county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	Fayette county.
. . . .	42	330	13,800	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Fayette county.
. . . .	34	280	9,520	. . .	. . .	. . .	. . . .	. . .	. . . .	. . . .	Fayette county.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Mathias Plott, ...	54	Married, . .	. . . .	. . . .	. . . .
Joseph Shaner, ...	14	Single, . . .	. . . .	February 5, .	. . . .
—— Carrans, ...	. . .	Single, . . .	. . . .	February 22,	. . . .
Peter Cardwell, ...	45	Married, . .	. . . .	February 15,	February 18,
John McBroom, ...	58	Single, . . .	. . . .	February 12,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of February, 1878 :

NATURE OF ACCIDENT.	REMARKS.
Rib broken, ...	By falling slate, at Cornell & Werling mine.
Arm broken, ...	At Cornell & Werling's mine ; was asleep at the door.
Injured by falling slate, ...	At the Chess mine, Gray & Bell, operators.
Injured in the back, ...	At Midway Block Coal Company mines, (by falling slate.)
Leg broken, ...	By falling slate, at Wood, Schrader & Co.'s mines.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Oak Ridge,	Oakridge Coal Co., (limited,)	Bituminous,		. .	. .	. .
Union Mine,	Hurst, Stonner & Co.,	Bituminous,		1	1	12
Iron City,	Phillips & Nittensway,	Bituminous,		2	. .	
No. 1,	Boyle & Hazlett,	Bituminous,	Slope,	1	1	60
No. 2,	Boyle & Hazlett,	Bituminous,	Slope,	1	1	60
Hudgson,	Lynch & Robinson,	Bituminous,	Drift,	. .	. .	. .
Springhill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
South Side,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Saxman,	M. Saxman,	Bituminous,	Drift,	. .	. .	. .
Loyalhanna Mine,	Loyalhanna Coal Company,	Bituminous,	Shaft & drift,	2	2	. .
Camphill,	David Steen & Sons,	Bituminous.	Drift,	. .	. .	. .
Tiptop,	C. H. Armstrong & Son,	Bituminous,	Drift,	. .	. .	. .
Globe Mine,	A. A. Hutchinson,	Bituminous,	Drift,	. .	. .	. .
Redhot,	Strickler & Lane,	Bituminous,	Drift,	. .	. .	. .
Cornell & Werling,	W. H. Brown's Heirs,	Bituminous,	Drift,	2	5	. .
Nixon Mine,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Deer Park,	Mahoning Coke Company,	Bituminous,	Slope,	2	2	36
Mt. Braddock,	Hogsett, Watt & Co.,	Bituminous,	Slope,	2	1	. .
Street's Run,	I. D. Risher,	Bituminous,	Drift,	. .		. .
Connellsville GasCoalCo.	C. G. Coal Company,	Bituminous,	Slope,	2	1	75
Ormsby Mine,	Joseph Keeling & Co.,	Bituminous,	Drift,	. .	3	. .
Green Springs,	Redman & Fawcett,	Bituminous,	Drift,	. .	1	35
Enterprise,	O'Neil & Co.,	Bituminous,	Drift,	. .	. .	. .
Enterprise,	V. Harding,	Bituminous,	Two shafts,	1	1	30
Jefferson,	Foster, Clark & Hood,	Bituminous,	Drift,	. .	. .	.
Keystone,	Keystone Coal Company,	Semi-bitum.	Drift,	. .	1	1
Camden,	George Lysle & Son,	Bituminous,	Drift,	. .	. .	. .
Laine,	Sandy Run Coal Company,	Semi-bitum.	Drift,	. .	. .	. .
Armstrong,	C. H. Armstrong & Son,	Bituminous,	Drift,	. .	. .	. .
Black Diamond,	W. H. Brown's Heirs,	Bituminous,	Drift,	. .	. .	. .
Enterprise,	Hartley & Marshall,	Bituminous,	Drift,	1	1	40
Pittsburgh Union C. C.,	Huntsman, Miller & Co.,	Bituminous,	Drift,	. .	. .	. .
Shafton Coal Company,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
	James O'Neil,	Bituminous,	Drift,	. .	1	. .
Eldorado,	Yuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Uniondale Coke Co.,	J. M. Reid,	Bituminous,	Slope,	2	2	20
White Ball,	Yough. Coal Hollow Coal Co.,	Bituminous,	Drift,	1	. .	. .
Hampton,	John McIntire,	Bituminous,	Drift,	. .	1	. .
Robbins Mine,	T. B. Robbins & Co.,	Bituminous,	Drift,	. .	. .	. .
Furnace Mines,	Dunbar Furnace Company,	Bituminous,	Slope,	. .	2	. .
Ferguson's,	H. C. Frick & Co.	Bituminous,	Slope,	1	1	. .
Mount Braddock,	Hogsett, Watt & Co.,	Bituminous,	Slope,	1	1	. .
Lamont Furnace,	Company,	Bituminous,	Slope,	1	1	. .
Pennsville Mines,	A. H. Sherrick,	Bituminous,	Drift,	1	1	10
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of March, 1878.

								Ventilation.									
										1st week.		2d week.		3d week.		4th week.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	60	. .	10	70	5												
1	18	. .	17	35	4	2	3,756										
2	45	5	11	61	3	3	3.200	2	8	. . .	4,650						
1	30	3	9	42	4	1	4,461	2	5¼, 7								
1	21	3	9	33	3	1	6,006	3	48								
. .	78	6	18	102	6	1	4,800	4	14	65	1,040						
										93	8·7						
										80	960						
. .	25	5	2	32	. .	. .	2,869										
. .	111	10	16	138	. .	. .	15,644	. .	. .	. . .	. . . . .	. . .	. . . . .	. .	19,500	. . .	20,000
. .	118	. .	20	138	. .	. .	9,677										
. .	25	5	8	38	3	. .	2,331										
4	60	5	12	77	7	. .	. . .	2	48	500	24,000	620	29,760	600	28,800	490	23,520
. .	80	10	14	104	6	1	7,800	2	30	. . .	. . . . .	. . .	4,795	. . .	4,850	175	5,250
. .	9	3	11	23	1	1	1,500	2	48								
. .	19	3	4	26	3	1	4,224	3	49								
. .	9	. .	1	10	2	1	2,2 0										
4	180	20	36	236	9	1	12,9·9	4	40¼								
. .	23	1	4	38	1	1	920	2	42								
2	26	2	3	31	4	1	. . .	3	56								
2	28	. .	5	33	4	1	5,200	2	48								
. .	112	16	11	139	5	2	7,600										
2	27	5	5	37	3	5	4,130										
2	140	26	46	212	19	. .	8,340	6	38½	147	5,513						
										147	5,513						
2	125	6	22	145	8	.	. . .	4	56	320	17,980	275	15,920	276	12,640	266	14,940
. .	136	12	28	176	19	1	10,205										
1	14	. .	3	17	. .	. .	500	2	20	227	4,540	202	4,440	178	3,560	291	5,820
. .	100	. .	20	120	7	1	. . .		42½	243	10,327	212	9,000	250	10,625	250	10.625
. .	90	. .	10	100	10	. .	7,000	3	72	175	12,600	200	14,400	300	21,600	300	21,600
. .	130	4	22	156	12	. .	6,034	8	3	120	5,760	130	7,240	125	6,000	135	6,488
. .	45	5	. . .	50	5	. .	2,750	2	48	100	4,800	100	4,800	100	4,800	120	5,760
. .	65	12	18	95	9	. .	1,571	3	36								
. .	80	. .	12	102	7	1	6,600	3	50	240	12,000	150	7,500	170	8,500	390	14.850
2	90	10	16	116	6	. .	8,000	2	40	275	11,000	305	12,200	310	12,400	300	12,000
. .	31	4	9	44	4	1	1,600	3	48								
4	46	8	6	60	4	. .	17, 67	2	45	250	11,250	245	11,025	240	10,800	230	10,350
1	100	20	20	140	6	. .	8,000	5									
.	15	. .	3	18	2	1	2,0·0	2	64								
3	26	. .	6	32	3	1	3,000	2	49								
1	. . .	. . .	2	2	1	. .	.	3	56	1,100							
. .	120	15	16	151	8	. .	8,352										
. .	100	10	10	120	6	. .	5,000	5	94	110	10,111	115	10,810	130	12,220	120	11,280
3	31	3	8	42	6	1	. . . .	2	52	745	7,540						
3	22	1	3	26	5	1	. . . .	2	35	480	16,800						
2	34	5	6	45	5	. .	. . . .	3	36								
2	30	2	6	38	4	. .	.	3	42	90	3,780						
2	18	5	5	28	3	1	2,652	2									
1	142	12	14	168	9	2	11,242	2									

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Oak Ridge,	....	....	....	....	....	....	....	....	....	....
Union Mine,	....	....	....	....	....	....	....	....	....	....
Iron City,	....	....	....	4,850	....	....	....	....	....	....
No. 1,	....	....	....	....	....	....	....	....	....	....
No. 2,	....	....	....	....	....	....	....	....	....	....
Hudgson,	....	....	....	....	....	....	....	....	....	....
Springhill,	....	....	....	3,200 1,500	....	5,000 4,000	....	....	4,500	3,000
Foster Slope,	....	....	....	....	....	....	....	....	....	....
South Side,	....	....	....	14,300 12,000	....	....	....	....	....	....
Saxman,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Mine,	552	....	....	....	....	....	....	....	....	....
Camphill,	....	....	....	....	....	....	....	....	....	....
Tiptop,	....	....	....	....	....	....	....	....	....	....
Globe Mine,	....	....	....	....	....	....	....	....	....	....
Redhot,	....	....	....	....	....	....	....	....	....	....
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Nixon Mine,	....	....	....	....	....	....	....	....	....	....
Deer Park,	....	....	....	....	....	....	....	....	....	....
Mt. Braddock,	....	....	....	....	....	....	....	....	....	....
Street's Run,	....	....	....	....	....	....	....	....	....	....
Connellsville Gas Coal Co.	....	....	100	3,000	....	....	....	....	....	....
Ormsby Mine,	....	....	234	8,775	....	....	....	....	....	....
Green Springs,	....	....	....	....	....	....	....	....	....	....
Enterprise,	....	....	....	....	....	....	....	....	....	....
Enterprise,	225	193	207	5,175	173	4,325	115	2,875	237	5,925
Jefferson,	....	....	....	....	....	....	....	....	....	....
Keystone,	243¾	....	75	5,400	100	7,200	100	7,200	125	8,000
Camden,	127½	....	60	2,100	50	1,750	54	1,889	60	2,100
Laine,	5,280	240	260	4,160	260	4,160	260	4,160	265	4,240
Armstrong,	....	....	....	....	....	....	....	....	....	....
Black Diamond,	....	....	2,300	9,506	....	....	....	....	....	8,000
Enterprise,	297½	35	200	7,000	180	6,300	210	7,350	215	7,525
Pittsburgh Union Coal Co.,	....	....	....	....	....	....	....	....	....	....
Shafton Coal Company,	241¼	156¼	160	7,200	150	6,750	155	6,975	160	7,200
James O'Neil,	....	....	....	....	....	....	....	....	....	....
Eldorado,	....	....	....	....	....	....	....	....	....	....
Uniondale Coke Company,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	....	....	....	....	....	....	....	....
Hampton,	....	....	....	....	....	....	....	....	....	....
Robbins Mine,	....	....	....	....	....	....	....	....	....	....
Furnace Mines,	....	....	85	5,726	....	....	....	....	....	....
Ferguson's,	....	....	....	....	....	....	....	....	....	....
Mount Braddock,	....	....	....	....	....	....	....	....	....	....
Lamont Furnace,	....	....	....	....	....	....	....	....	....	....
Pennsville Mines,	....	....	....	....	....	....	....	....	....	....
Pine Run,	....	....	....	....	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

Ventilation.											
		1st week.		2d week.		3d week.		4th week.			Remarks.
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	4,800	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	36	80	2,880	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	17,400	. . .	19,300	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	24,400	. . .	34,700	. . .	. . .	. . .	28,000	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	48	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	50	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	16	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	63	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	42	170	7,140	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	33½	75	2,531	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
		75	2,531								
. . .	56	274	15,112	310	17,020	275	12,512	407	22,875	67,519	Allegheny county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
183	22	173	3,114	154	2,792	134	2,412	227	4,080	3,096	Washington county.
. . .	48	170	8,160	171	8,200	200	9,600	200	9,600	. . .	Allegheny county.
100	72	180	12,960	200	14,400	200	14,400	250	18,000	14,940	Somerset county.
56	25	70	1,975	65	1,625	68	1,700	70	1,750	70½	Allegheny county.
4,200	16	500	8,000	500	8,000	500	8,000	515	8,256	8,426	Bedford county.
. . .	72	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	45	210	9,450	160	7,200	180	8,100	330	18,550	. . .	Washington county.
704⅓	50	295	14,750	290	14,500	305	15,250	300	15,000	297½	Allegheny county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
156¼	98	125	12,250	125	12,250	120	11,760	120	11,760	122½	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	24	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	36	. . .	9,000	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.
. . .	40	310	12,400	320	12,800	360	14,400	340	13,600	. . .	Washington county.
. . .	36	140	5,040	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	24	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	65	165	10,425	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	48	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Fayette county.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Allegheny county.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Manassa Boyle, ...	19	Single, . .	. . . .	March 15, . .	March 19, . .
James Burt, ...	13	Single, . .	. . . .	March 26, . .	April 2, . . .
Fred. Hofacker, ...	51	Married, . .	. . . .	March 15, . .	March 18, . .
John Shorrer, ...	50	Widower, .	. . . .	March 15, . .	March 18, . .
John Brown, ...	48	Married, . .	. . . .	March 15, . .	March 18, . .
Augt. Lehman, ...	46	Single, . .	. . . .	March 15, . .	March 18, . .
James Neal, ...	. . .	Married, . .	. . . .	March 11, . .	. . . .
James McFeely, ...	. . .	Married, . .	. . . .	March 27, . .	. . . .
John Walker, ...	. .	Married, . .	. . . .	March 30, . .	. . . .
John Livingstone, . . .	21	Married, . .	. . . .	February 7, .	. . . .
Thomas Johns, ...	42	Married, . .	. . . .	March 27, . .	April 2, . . .
William Johns, ...	14	Single, . .	. . . .	March 27, . .	April 2, . . .
Charles Kuder, ...	35	Married, . .	. . . .	March 27, . .	April 2, . . .

Manassa Boyle, killed at the Loyalhanna shaft, was working with his father and brother-in-law widening one of the headings, and had just been eating his dinner, and was preparing to commence work, when the slate fell, striking him and killing him instantly. At the investigation, his father and brother-in-law stated that they had sounded the slate a little while before, and thought it was quite safe. No inquest was held, the coroner not arriving until after the body was buried.

James Burt was working with his father at James O'Neil mine; was hurt by falling slate while loading a car. He was taken out of the mine as quick as possible, and medical attendance procured, but he died the next day.

Fred. Hofacker, John Sharrer, John Brown, and Auguest Lehman were hurt in the following manner: On March 15, a train of coal wagons was being drawn out of Joseph Keeling & Co,'s mine, at Spiketown, Allegheny county, when George Storey, one of the mule drivers, attempted to cross the track with his trip of loaded wagons, when one of the wagons jumped the track, and before it could be got out of the way a collision occurred. A number of miners leaving work were on the moving train, riding with their legs between the wagons, and the above four miners were hurt, one having his leg broken, (that of Hofacker,) and so badly bruised that amputation was found necessary. He died March 23. The other three, Mr. Keeling informs me, will be at work in a few days. This accident was the result of pure carelessness on the part of the employés, and a total disregard and respect for the rules laid down for the gov-

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of March, 1878.

NATURE OF ACCIDENT.	REMARKS.
Killed, ...	At Loyalhanna shaft, Westmoreland county, by falling slate.
Killed, ...	At James O'Neil, by falling slate.
Feet bruised, ...	At Joseph Keeling & Co., Southside, Pittsburgh.
Feet bruised, ...	At Joseph Keeling & Co., Southside, Pittsburgh.
Feet bruised, ...	At Joseph Keeling & Co., Southside, Pittsburgh.
Feet bruised, ...	At Joseph Keeling & Co , Southside, Pittsburgh.
Nose cut slightly, ...	At Old Eagle mine, W. H. Brown's heirs.
Hurt by falling slate, ...	At Old Eagle mine, W. H. Brown's heirs.
Hurt by falling slate, ...	At Old Eagle mine, W. H. Brown's heirs.
Killed by falling slate, ...	At William Hodgson's mine, operated by Lynch & Robinson.
Burned slightly, ...	At Southside mines, Westmoreland Coal Co.
Burned slightly, ...	At Southside mines, Westmoreland Coal Co.
Burned slightly, ...	At Southside mines, Westmoreland Coal Co.

ernment of this colliery, together with the want of some proper mode of communicating with the engineer in charge of the moving train, and if more care is not taken, I shall be under the necessity of complaining against the parties at fault.

Thomas Johns, William Johns, and Charles Kuder, burned by explosive gas at the Southside mine, Westmoreland Coal Company, was also the result of disobedience to orders, as the fireman, a few minutes before, told them not to go into the place until he came back from his rounds through the mine. I have made a thorough examination of this mine, and found it satisfactory in every respect. In No. 4 dip heading a number of ribs or pillars were being taken out, and during the night of March 25 a crush came on. The upper part of the heading came down. It was thought that the roof had settled, and men were set to work to put things in order, but it had to be abandoned. The men that were burned did not work at the fall, but one of them (Kuder) went there to look for his tools.

John Livingstone, killed at Lynch & Robinson's mine, in February, was working with his father, who had just told him to set a prop a few minutes before he was killed. No inquest was held, neither was I notified until I received the report of the firm for March.

James McFeely, John Walker, and James Neal, hurt at the Old Eagle, are all at work, their injuries being of a slight nature.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the* *vania, for the Month*

Name of Colliery.	Name of Operator.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
Springhill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Southside,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Turtle Creek, No. 4,	N. Y. and Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Turtle Creek, No. 3,	N. Y. and Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Sandy Creek,	N. Y. and Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Plum Creek,	N. Y. and Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Umpire Mine,	Cunningham & Co.,	Bituminous,	Drift,	. .	. .	. .
Eldorado,	Zuek & Heny,	Bituminous,	Drift,	. .	. .	. .
Loyalhanna,	Loyalhanna Coal Company,	Bituminous,	Shaft & Slope,	3	1	. .
Redhot,	Striekler & Co.,	Bituminous,	Drift,	. .	. .	. .
White Ball,	Y. C. H. Coal Company,	Bituminous,	Drift,	1	. .	. .
Lane,	Morley & Langdon,	Semi-bitum.	Drift,	. .	. .	. .
Pitts. and Conn. G. C. Co.	Pitts. and Counellsville G. C. Co.	Bituminous,	Shaft & Drift,	4	4	. .
	James O'Neil,	Bituminous,	Drift,	. .	1	. .
Fort Pitt,	Fort Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .
	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .
Horner & Roberts,	Horner & Roberts,	Bituminous,	Drift,	2	1	. .
New Eagle,	Lindsay & MeCutcheon,	Bituminous,	Drift,	. .	1	10
	Millwood Coal and Coke Co.,	Bituminous,	Shaft,	1	1	. .
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Mount Braddock,	Hogsett, Watt & Co.,	Bituminous,	Slope,	1	1	. .
Keystone,	W. H. Brown's Heirs,	Bituminous,	Drift,	. .	. .	. .
McCloskey,	W. H. Brown's Heirs,	Bituminous,	Drift,	. .	. .	. .
Mansfield C. and C. Co.,	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	1	1	12
Hampton,	John MeIntyre,	Bituminous,	Drift,	. .	1	. .
Keystone C. and M. Co.,	Keystone Coal and Mauf'g Co,,	Semi-bitum.	Drift,	. .	. .	. .
Midway Block Coal Co.,	Midway Block Coal Company,	Bituminous,	Drift,	2	1	. .
MeCabe Slope,	James Clark,	Bituminous,	Slope,	1	1	22
Union Mines,	Hurst, Stouer & Co.,	Bituminous,	Drift,	1	. .	. .
Shafton Coal Company,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Camphill,	David Steem & Sons,	Bituminous,	Drift,	. .	. .	. .
Cornell & Werling,	W. H. Brown's Heirs,	Bituminous,	Drift,	2	5	. .
Greensburg Mines,	Greensburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Six Mile Ferry, No. 1,	H. B. Hays & Bro.,	Bituminous,	Drift,	. .	1	10
Six Mile Ferry, No. 2,	H. B. Hays & Bro.,	Bituminous,	Drift,	1	. .	. .
Beek's Run,	H. B. Hays & Bro.,	Bituminous,	Drift,	2	. .	. .
Deer Park,	Mahouing Coal and Coke Co.,	Bituminous,	Slope,	2	2	36
Conard,	R. B. Wigton,	Semi-bitum.	Shaft,	2	1	40
Allison,	Jonathan Allison,	Bituminous,	Drift,	. .	. .	. .
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Shaft No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	. .
Shaft No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	. .	. .	. .
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	. .	. .	. .
Waverly Mines,	J. B. Correy,	Bituminous,	Drift,	. .	. .	. .
Armstrong Mine,	C. H. Armstrong & Son.,	Bituminous,	Drift,	. .	. .	. .
Leeehburg Mines,	Leechburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Saxman Mines,	M. Saxmau & Co.,	Bituminous,	Drift,	. .	1	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of April, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Ventilation. Number of openings.	Ventilation. Inlet—size of feet.	1st week. Velocity of air current per minute in inlet.	1st week. Number of cubic feet passing in per minute at inlet.	2d week. Velocity of air current per minute at inlet.	2d week. Number of cubic feet passing in per minute at inlet.	3d week. Velocity of air current per minute at inlet.	3d week. Number of cubic feet passing in per minute at inlet.	4th week. Velocity of air current per minute at inlet.	4th week. Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	109	10	16	135	. .	. .	11,387										
. .	26	5	2	33	. .	. .	2,752										
. .	117	10	20	147	. .	. .	8,232										
. .	161	10	10	193	8	1	. . . .	4	. .	872	30,845	967	36,826	1,055	39,487	1,012	38,200
. .	18	1	1	20	1	. .	. . . .	3	42	280	11.760	300	12,600	342	14,364	385	16,170
. .	193	42	52	287	23	5	. . . .	21	48	128	6,144	. . .	. . . . .	. .	. . . . .	152	7,296
. .	116	25	30	171	16	. .	. . . .	10	48	. .	. . . . .	165	4,281	. . .	. . . . .	100	5,625
. .	40	5	6	51	4	1	2,400	4	40								
. .	17	3	17	37	2	1	2,628	2	64	. . .	. . . . .	. . .	. . . . .	. . .	. .	40	2,560
4	50	. .	3	. . .	7	. .	. .	2	48	600	28,800	500	21,000	500	24,000	475	22,800
. .	10	.	1	11	2	1	2,000	3									
1	105	10	25	140	14	1	3,000	3	56	. . .	12,000						
. .	48	5	. . .	53	5	. .	2,500	2	48	100	4,800	100	4,800	100	4,800	100	4,800
7	76	2	109	187	5	5	13,929	2	64	200	14,976	175	13,434	150	11,872	125	10.320
. .	110	20	20	150	6	. .	5,861	5									
. .	75	4	11	90	8	1	. . . .	3	42	20	840						
. .	18	. .	2	20	1	. .	500	2	42								
1	200	. .	38	238	17	. .	14,000	2	51	400	21,600	400	21,600				
1	50	8	6	62	2	. .	2,000	2	42								
3	50	3	9	62	6	. .	. . . .	2	. .	200	10,000						
. .	23	1	5	39	1	1	1,200										
2	33	. .	6	37	5	2	5,000	3	42								
. .	125	22	39	186	10	. .	8,477										
. .	100	12	18	130	12	. .	6,660										
1	45	3	20	73	5	2	1,657	13	48								
. .	130	15	19	164	8	. .	6,740										
. .	80	. .	10	90	7	. .	4,150	3	72	175	12,600	175	12,600	175	12,600	200	14,400
2	65	4	14	83	5	1	2,000	2	40	. . . .	8,000						
1	33	3	8	44	2	1	1,200	3									
1	18	. .	16	34	4	2	3,863										
4	40	7	6	53	4	. .	1,675	2	45	275	12,375	320	14,400	245	11,025	230	10,350
. .	76	10	14	100	6	1	7,280	5	48	166	4,980	185	5,550	146	4,380	146	4,380
4	175	18	35	228	9	1	1,432	4	40½								
. .	18	. .	4	22	3	1	1,712	. .	42	. .	. . . . .	. . .	. . . . .	. . .	. . . .	187	7,860
. .	129	. .	48	177	6	1	11,949	6	72								
. .	120	. .	37	157	7	. .	6,296	3	42								
2	171	. .	48	219	16	2	9,638	10	51								
2	27	2	3	32	4	2	. . . .	3	54	148	16,000	148	16,000	148	16,000	148	16,000
2	44	14	6	64	5	2	3,675	2	42	. . .	. . . .	. . .	. . .	. . .	. . . .	103	
. .	17	1	6	24	1	1	985	4	56	125	7,840	120	7,280	100	6,160	125	7,840
. .	140	20	40	200	12	3	. . . .	. .	. . . .	. .	22,000	. . .	20,800	. . .	19,200	. . .	20,500
. .	228	5	37	270	12												
4	200	22	55	277	13	3	. . . .	. .	1x1¼	1,200	12,000	1,000	12,000	1,000	12,000	1,000	12,000
									116¼	215	22,800	215	22,800	215	22,800	215	22,800
. .	186	20	36	242	14	. .	. . . .	. .	30½	200	6,300	210	6.615	200	6,300	210	6,615
									28⅓	150	4,300	170	4,820	155	4,400	170	4,820
									39⅛	182	7,181	264	10,428	200	7,900	200	7,900
. .	20	. .	3	23	2	1	3,872										
. .	50	4	5	59	4	. .	2,800	3	56	200	11,200						
. .	70	10	15	95	9	. .	2,520										
. .	70	10	15	95	0												
. .	27	3	9	39	3	. .	2,665½	2	85								

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Foster Slope,	....	....	....	....	....	....	....	....	....	...
Springhill,	....	....	....	1,800	....	1,500	....	5,000	....	5,500
				2,400	....	2,000	....	5,750	....	6,000
Southside,	....	....	....	7,800	....	7,000	...	7,200	....	....
				10,200	....	9,500	....	8,500		
				11,500	....	10,500	....	8,900		
Turtle Creek, No. 4.	....	..	....	....	....	....	....	....	....	....
Turtle Creek, No. 3,	....	....	....	....	....	....	....	....	....	....
Sandy Creek,	140	132	108	5,184	....	....	....	....	125	6,000
Plum Creek,	....	....	....	....	....	....	....	....	50	2,400
Umpire Mine,	....	....	....	....	....	....	....	....	....	....
Eldorado,	....	....	....	....	....	....	....	....	....	....
Loyalhanua,	....	....	....	....	....	....	....	....	....	....
Redhot.	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	..	9,000	....	....	....	....	....	....
Lane,	100	4,800	260	4,160	260	4,160	260	4,160	265	4,240
Pitts. and Conn. G. C. Co.,	162½	....	125	10,310	100	8,768	125	10,320	185	9,078½
James O'Neil,	....	....	....	....	....	....	....	....	....	....
Fort Pitt,	....	....	....	....	....	....	....	....	....	....
Thomas Fox,	....	....	....	....	....	....	....	....	....	....
Horner & Roberts,	....	....	....	5,000	....	....	....	....	....	....
New Eagle.	....	....	....	....	....	....	....	....	....	....
Millwood Coal and Coke Co.	....	..	200	8,000	200	8,000	200	8,000	200	8,000
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Mount Braddock,	....	....	....	....	....	....	....	....	....	....
Keystone,	....	....	....	....	....	....	....	....	....	....
McCloskey,	....	....	....	....	....	....	....	....	....	....
Mansfield Coal and Coke Co.	....	....	....	....	....	....	....	....	....	....
Hampton,	....	....	....	....	....	....	....	....	....	....
Keystone C. and Manf'g Co	181	....	100	7,200	100	7,200	75	5,400	100	7,200
Midway Block Coal Co.,	200	....	....	....	....	....	....	....	..	....
McCabe Slope,	....	....	....	....	....	....	....	....	....	....
Union Mines,	....	....	....	....	....	....	....	....	....	....
Shafton Coal Company,	267	...	165	7,425	180	8,100	150	6,750	155	6,975
Camphill,	19,290	....	....	....	....	....	....	....	....	....
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Greensburg Mines,	....	148	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 1,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 2,	....	....	....	....	....	....	....	....	....	....
Beek's Run,	....	....	....	....	....	....	....	....	....	....
Deer Park,	148	148	....	....	....	....	....	....	....	....
Conard,	....	....	....	....	....	....	....	....	95	....
Allison,	1,220	....	....	....	....	....	....	....	....	....
Coal Run,	....	....	500	22.000	480	21,000	450	19,200	475	20,500
No. 4,	....	....	380	22,800	430	21,600	440	23,800	460	25,620
Shaft No. 2,	....	560	24,200	490	24,100	530	24,000	535	24,200	....
Shaft No. 1,	....	....	410	18,000	430	21,000	400	19,000	415	19,800
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Waverly Mines,	....	200	....	....	....	....	....	....	....	....
Armstrong Mine,	....	....	....	....	....	....	....	....	....	....
Leechburg Mines,	....	....	....	....	....	....	....	....	....	....
Saxman Mines,	....	....	....	....	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	. . .	. . .	17,000	. .	16,900	. . .	17,200	. . .	17,800	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	23,500	. . .	22,500	. . . .	Westmoreland county.
. . . .	. . .	550	18,402	747	20,345	602	20,792	823	26,224	. . . .	Allegheny county.
. . . .	45	260	11,700	265	11,925	280	12,600	290	73,000	. . . .	Allegheny county.
177	48	128	6,141	. .	. .	. . .	. . . .	152	7,296	6,720	Allegheny county.
. . .	. . .	. . .	. . .	120	6,750	. . .	. . . .	100	5,625	. . . .	Allegheny county.
. . . .	56	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Fayette county.
. . . .	9	. . .	. . .	. . .	. . .	. . .	. . .	240	2,322	. . . .	Fayette county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Fayette county.
. . . .	36	.	8,000	. . .	. . .	. . .	. . .	. . .	. . .	7,000	Westmoreland county.
. . . .	16	300	8,000	500	8,000	500	8,000	515	8,250	. . . .	Bedford county.
113¼	. . .	125	10,310	100	8,768	125	10,320	105	9,078¼	113¾	Fayette county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	30	100	3,000	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	42	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	23,000	475	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . .	49¼	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Washington county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	56	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Fayette county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	48	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
94	72	200	14,400	260	14,400	200	14,400	275	19,800	15,750	Somerset county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Washington county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
163	98	135	13,230	160	15,680	125	12,250	120	11,760	13,230	Westmoreland county.
. . . .	24	146	3,504	130	3,984	137	3,288	137	3,288	14,064	Allegheny county.
. . . .	50	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	25	. . .	. . .	. . .	. . .	. . .	. . .	109	4,578	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Allegheny county.
. . . .	51	358	18,000	358	18,000	358	18,000	358	18,000	18,000	Fayette county.
95	22	. . .	. . .	. . .	. . .	.	.	100	. . . .	. .	Bedford county.
. . . .	42	100	4,620	100	4,620	125	5,880	100	4,620	106¼	Washington county.
. . . .	40	550	22,000	520	20.800	480	19,200	510	20,400	. . . .	Westmoreland county.
. . . .	74	230	17,020	215	15,910	240	17,760	260	19,240	. . . .	Westmoreland county.
	11	260	2,860	250	2,750	272	3,000	290	3,190		
	11	260	2,860	250	2,750	272	3,000	290	3,190		
. . .	40	600	24,000	600	24,000	600	24,000	600	24,000	. . . .	Westmoreland county.
. . . .	50⅗	350	17,734	410	20,900	370	18,746	385	19,500	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	56	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.
. . . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	Westmoreland county.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Louis Reks, ...	18	Single, . . .	. . . .	April 24, . . .	April 26, . . .
William Stewart, . . .	22	Single, . . .	. . . .	April 15, . . .	April 16, . . .
Jacob Billinger, ...	. . .	Single, . . .	. . . .	April 30, . . .	. . . .
Thomas McGower, . .	. . .	Single, . . .	. . . .	April 20, . . .	. . . .
Alexander Carroll, . .	. . .	Married, . .	. . . .	April 23, . . .	. . . .

Louis Reks was working with his brother, driving a heading at Leonard & Co.'s mines, when he attempted to remove a post from under the slate, and, before he could get out of the way, the slate fell upon him, killing him instantly. Inquest was held by the coroner, and a verdict of accidental death was returned.

William Stewart was working in a pillar, and was removing the timber when he was struck by a piece of roof coal, injuring him about the head, from which he recovered in two weeks, and is now at work.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of April, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed, ...	At Leonard & Co.'s mines, Washington co.
Hurt about the head, ...	At T. B. Robbins & Co.'s mines, Washington co.
Leg broken by slate, ...	At Penn Gas Coal Company's shaft, No. 2.
Hurt by falling of slate, ...	At James O'Neil's mines, Allegheny county.
Killed by falling coal and slate, . . .	At Reed's mines, Washington county.

The accident to Jacob Billinger occurred while removing timber at the Penn Gas Coal Company's shaft, No. 2.

Alexander Carroll worked at Reed & Co.'s mine, near Greenfield, Washington county, and was inbearing when the accident occurred. I was not notified, and no investigation was held by me.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

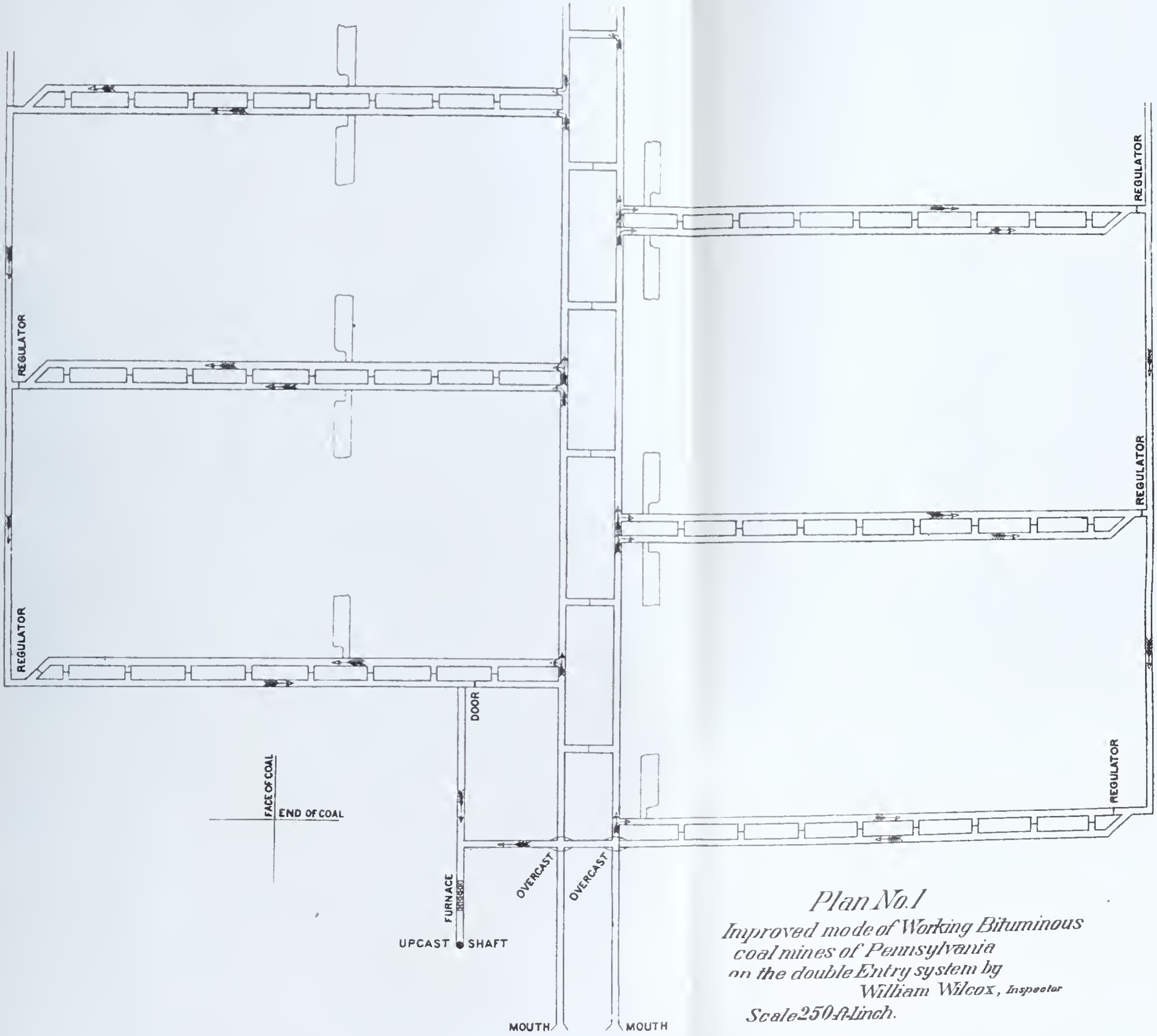
NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous, or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines	Horse power.
1	2	3	4	5	6	7
Shafton,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Cornell & Werling,	W. H. Brown's heirs,	Bituminous,	Drift,	2	5	.
Sterling Mine,	Brown & Cochran,	Bituminous,	Drift,	. .	. .	. .
Pitts. and Conn. G. C. Co.	Pitts. and Connellsville G.C.Co.,	Bituminous,	Shaft,	1	1	. .
Old Eagle,	W. H. Brown's heirs,	Bituminous,	Drift,	. .	. .	.
Larimer's,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Southside,	Westmoreland Coal Company,	Bituminous,	Drfi,,	. .	. .	.
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
Lemont,	Ewing, Hanna & Co.,	Bituminous,	Slope,	1	1	30
Mt. Braddock,	Hogsett, Watt & Co.,	Bituminous,	Slope,	1	1	. .
Sandy Creek,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Plum Creek,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
No. 3,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
No. 4,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Keystone,	Keystone Coal Company,	Semi-bitum.	Drift,	. .	. .	. .
Knob Mine,	Knob Coal Company,	Bituminous,	Slope,	1	1	30
Beck's Run,	H. B. Hays & Bro.,	Bituminous,	Drift,	2	. .	. .
Nixon Mine,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	.
Mansfield C. and C. Co.,	. . . . . .	Bituminous,	Drift,	1	1	12
Amity Mines,	J. C. Risher,	Bituminous,	Drift,	. .	. .	. .
Oak Ridge C. Co., limited	. . . . . .	Bituminous,	Drift,	. .	. .	. .
Hampton Mine,	John McIntyre,	Bituminous,	Drift,	. .	1	. .
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	. .
Fairhaven,	Pitts. and Castleshannon C. Co.,	Bituminous,	Drift,	. .	. .	. .
Ocean Mines,	W. L. Scott & Co.,	Bituminous.	Drift,	. .	1	. .
	Laufman & Co.,	Bituminous,	Drift,	. .	. .	. .
Eldorado,	Zuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Leechburg Colliery,	. . . . . .	Bituminous,	Drift,	. .	. .	. .
Greensburg Coal Co.,	. . . . . .	Bituminous,	Drift,	. .	. .	.
Loyalhanna Shaft C. Co.,	. . . . . .	Bituminous,	Shaft,	. .	. .	. .
Millwood Coal Company,	. . . . . .	Bituminous,	Shaft,	1	1	. .
Umpire Mine,	Cunningham & Co.	Bituminous,	Drift,	. .	. .	. .
Deer Park,	Mahoning Coal Company,	Bituminous,	Slope,	2	2	36
	Horner & Roberts,	Bituminous,	Drift,	2	1	. .
Rising Sun,	Markle & Co.,	Bituminous.	Drift,	. .	. .	. .
Cherry Mine,	Morris McCue,	Bituminous,	Drift,	. .	. .	. .
Lain Mine,	Sandy Run Coal Company,	Semi-bitum.	Drift,	. .	. .	. .
Laurel Hill,	W. P. Rend & Co.,	Bituminous,	Drift,	. .	. .	. .
Camp Hill,	D. Steen & Sons,	Bituminous,	Drift,	. .	. .	. .
White Ball,	Yough. Coal Hollow Coal Co.,	Bituminous,	Drift,	1	. .	. .
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	2	. .	. .
	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .
Midway Block Coal Co.,	Jonah Taylor.	Bituminous,	Drift,	1	1	. .
Globe Mines,	A. A. Hutchinson,	Bituminous,	Drift,	. .	. .	. .
Black Diamond,	W. H. Brown's heirs,	Bituminous,	Drift,	. .	. .	. .
Shaft, No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	. .
Shaft, No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	. .
Drift, No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of May, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
4	33	8	5	46	4	. .	3.303	. .	45	275	12,375	300	13,500	200	9,000	220	9.900
4	180	20	35	235	9	1	6,923	4	40¼								
. .	110	. .	20	130	16	4	24,000										
2	77	2	109	188	5	5	13,864	. .	64	130	10,630	240	17,459	130	10,630	75	7,216
. .	90	12	10	112	5	. .	2,264	4	39	350	13,650	310	12,090	340	13,260	370	14,460
. .	64	2	. . .	66	. .	. .	5,577										
. .	119	. .	22	141	14	2											
.	109	. .	. .	. .	.	.	9,015	. .	. . .	. . .	21,700	. . .	22,000	. . .	22,500	. . .	22,400
2	37	4	5	46	4	1	4,470	. .	. . .	. . .	. . . .	. . .	. . . .	80	3,696	75	3,570
														85	3,906	90	4,200
														60	2,856	60	2,856
2	33	. .	6	39	5	1	13,000	1	27	350	9,450						
								2	18	338	5,940						
. .	197	43	52	292	23	5	4,979	21	48	190	9,120	. . .	. . . .	200	9,600		
. .	116	25	30	171	16	. .	3,518	10	56	. . .	. . . .	300	1,675	. . .	. . . .	150	8,437
. .	55	3	6	64	3	1	3,234	2	42	330	13,860	350	14,700	345	16,590	385	16,170
. .	164	19	10	193	8	1	11,565	4	72	925	34,642	990	37,068	1,094	40,658	1,148	42,780
. .	80	. .	10	90	7	. .	3,500	3	72	150	10,800	200	14,400	160	11.520	200	14,400
1	16	8	5	29	1	. .	2,000	2	60	90	5.400	92	5,520	89	5,340	88	5,240
2	183	. .	48	231	16	2	10,968	10	52								
. .	22	. .	4	26	1	1	880	2	42								
2	45	5	21	71	5	2	1,382	13	48								
. .	170	20	30	220	11	4	3,104	4	56	. . .	256						
. .	38	.	11	49	5												
. .	120	9	19	148	8	.	5,516										
1	141	10	11	162	8	2	2, 01										
. .	150	10	7	167	6	1	6,965	. .	63	100	6,200	93	5,859	100	6,200	97	6,111
2	125	18	19	160	8	. .	7,500	2	56	200	11,200						
. .	18	. .	2	20	1	1	1,000										
. .	19	. .	3	22	2	1	2,679	2	9	200	1,800	. . .	. .	. . .	. . .	200	1,800
. .	70	. .	. . .	70	4	4	7.800	3	48	180	8,640	160	7,680	190	9,120	180	8,640
. .	19	. .	4	23	3	1	1,730	.	42	208	8,736	380	15,960	186	7,812	190	7,980
. .	65	10	9	84	7	. .	. . . .	2	48	500	24,000	500	24,000	330	15,840	320	15,360
6	35	5	9	49	6	. .	. . . .	2	51	200	9,000						
. .	·103	10	4	117	5	2	275	4	64	202	. . . .	182	. . . .	300	. . . .	252	
2	30	2	4	36	4	2	5,024	3	56	150	9,430	140	7,840	230	12,880	200	11,760
									54	130	7,020	130	7,020	250	13.500	200	10,800
1	80	. .	20	100	7	. .	3,840	2	54	350	18,900						
. .	19	.	3	22	2	1											
. .	35	4	7	46	2	1	7,000										
. .	48	5	.	53	5	. .	2,500	2	48	100	4,800	100	4.800	100	4,800	120	5,760
. .	. . .	.	. . .	. . .	. .	. .	. . . .	2	52	230	11,960						
. .	80	10	11	101	5	1	6,000	5	48	146	3,504	150	3,600	140	3,360	140	3,360
1	100	10	13	123	14	. .	7,000	3	56	. . .	12,000	. . .	12,000	. . .	12,000	. . .	12,000
2	16	. .	19	35	3	1	3,040	2	49								
. .	17	. .	2	19	2	. .	934	2	42								
2	75	5	13	93	6	. .	4,000	2	40								
. .	18	3	4	25	3	1	3,735	2	56								
. .	100	. .	12	112	7	8	3,040	3	48	400	19,200						
2	186	20	36	242	14	. .	. . .	3	31¼	100	3,1 0	100	3,150	100	3,150	100	3,150
									28⅓	220	9,050	190	5,380	180	5,700	180	5,700
									39½	190	7,505	265	10,470	285	11,250	280	11,040
4	200	22	55	277	13	3	. . . .	3	106¼	. . .	. .	. . .	27,000		27,000	. . .	24,000
. .	228	5	37	270	12	. .	. . . .	4	40	250	10,900	280	11,200	290	11,600	310	12,400
									40	240	9,600	300	12,000	290	11,600	250	10,000
. .	154	26	42	222	15	3	. . . .	9	. . .	. . .	20,000	. . .	21,600	. . .	20.050	. . .	22,000

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

Name of Colliery.	Ventilation.									
			1st week.		2d week.		3d week.		4th week.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Shafton,	249	....	175	7,875	200	9,000	150	6,750	160	7,200
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Sterling Mine.	....	....	....	....	....	....	....	....	....	....
Pitts. and Conn. Gas C. Co.,	143	....	100	8,760	140	11,302	110	9,389	60	6,285
Old Eagle,	133	65	....	....	....	....	....	....	....	....
Larimer's,	....	....	....	6,700	....	....	....	....	....	....
Southside,	....	....	....	14,300	....	....	9,000 10,000	....	....	7,200
Foster Slope,	....	....	....	....	....	13,200	....	....	....	....
Lemont,	77½ 87½ 60	....	....	....	....	....	95	2,448	96	2,472
Mt. Braddock,	....	....	....	....	....	....	....	....	....	....
Sandy Creek,	195	130	65	3,120	....	....	65	3,120	....	....
Plum Creek,	....	....	....	....	50	2,400	....	....	60	2,880
No. 2,	....	....	....	....	....	....	....	....	....	....
No. 4,	....	....	....	....	....	....	....	....	....	....
Keystone,	177½	177½	75	5,400	75	5,400	56	4,032	75	54
Knob Mine,	....	89¾	68	3,400	69	3,450	68	3,400	68	3,400
Beck's Run,	....	....	....	....	....	....	....	....	....	....
Nixon Mine,	....	....	....	....	....	....	....	....	....	....
Mansfield Coal and C. Co.,	....	....	....	....	....	....	....	....	....	....
Amity Mines,	....	....	....	....	....	....	....	....	....	....
Oak Ridge,	....	....	....	....	....	....	....	....	....	....
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
Pine Run,	....	....	....	....	....	....	....	....	....	....
Fairhaven,	95	81	82	3,445	78	3,276	80	3,360	82	3,445
Ocean Mines,	200	....	....	....	....	....	....	....	....	....
Laufman & Co.,	....	....	....	....	....	....	....	....	....	....
Eldorado.	....	....	....	....	....	....	....	....	....	....
Leechburg Colliery,	....	....	....	....	....	....	....	....	....	....
Greensburg Coal Company,	241	208½	....	....	....	....	....	....	....	....
Loyalhanna Shaft Coal Co.,	....	....	....	....	....	....	....	....	....	....
Millwood Coal Company,	....	200	200	7,000	....	....	....	....	....	....
Umpire Mine,	233	....	300	....	200	....	370	....	260	....
Deer Park,	10,502	....	140	6,860	140	6,860	200	9,800	180	10,080
	9,585	....	150	5,400	150	5,400	190	6,840	170	8,330
Homer and Roberts,	....	....	....	....	....	....	....	....	....	....
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Cherry Mine,	....	....	....	....	....	....	....	....	....	....
Lain Mine,	5,280	....	260	4,160	260	4,160	250	4,160	265	4,240
Laurel Hill,	....	....	230	6,480	....	....	....	....	....	....
Camp Hill,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	10,000	....	10,000	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Thomas Fox,	....	....	....	....	....	....	....	....	....	....
Midway Block Coal Co.,	200	....	....	....	....	....	....	....	....	....
Globe Mines,	....	....	....	....	....	....	....	....	....	....
Black Diamond,	....	....	200	8,800	....	....	....	....	....	....
Shaft, No. 1,	....	....	430	18,500	450	19,500	450	20,400	440	19,000
Shaft, No. 2,	....	....	495	27,000	480	2,600	470	24,000	470	24,000
Drift, No. 4.	....	....	440	19,800	530	25,000	500	23,000	500	23,000
Coal Run,	....	....	500	21,000	490	21,900	475	20,800	495	23,000



Plan No. 1
Improved mode of Working Bituminous coal mines of Pennsylvania on the double Entry system by William Wilcox, Inspector
Scale 250 ft. 1 inch.

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per mile at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of current air per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
21	22	23	24	25	26	27	28	29	30	31	
171	98	135	13,230	150	14,700	100	9,800	110	10,780	1,212	Westmoreland county.
....	50	....	....	....	....	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Fayette county.
102¼	....	100	8,760	140	11,302	110	9,389	60	6,285	102½	Fayette county.
....	42	510	21,042	460	17,320	500	20,000	530	22,260	20,155	Allegheny county.
....	....	....	....	....	13,500	....	12,610	....	11,800	....	Westmoreland county.
....	....	....	....	....	22,100	....	23,000	....	21,700	....	Westmoreland county.
....	....	....	....	....	....	....	....	....	....	....	Westmoreland county.
95¼	48	....	....	....	....	210	10,560	220	11,058	215	Fayette county.
....	40	400	16,000	....	....	....	....	....	....	....	Fayette county.
130	....	160	7,680	....	....	160	7,680	....	....	7,680	Allegheny county.
....	56	....	....	200	11,250	....	....	100	5,625	....	Allegheny county.
....	45	300	13,500	325	14,625	370	16,650	378	17,010	....	Allegheny county.
....	25	773	28,792	872	32,778	922	33,704	967	35,647	....	Allegheny county.
70¼	72	175	12,600	200	11,400	150	10,800	200	14,400	13,050	Somerset county.
89¾	30	183	5,500	187	5,610	181	5,430	179	5,370	152½	Washington county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
....	48	....	....	....	....	....	....	....	....	....	Allegheny county.
....	56	....	....	....	....	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
580	56	112	6,272	105	5,880	107	5,992	112	6,272	107½	Allegheny county.
....	41	....	....	....	....	....	....	....	....	....	Westmoreland county.
....	....	....	....	....	....	....	....	....	....	....	Westmoreland county.
....	49	....	....	....	....	....	....	30	1,320	....	Fayette county.
....	....	....	....	....	....	....	....	....	....	....	Westmoreland county.
....	25	152	6,384	233	9,786	155	6,510	164	6,888	176	Westmoreland county.
....		....	....	....	....	....	....	....	....	....	Westmoreland county.
....	....	150	7,000	....	....	....	....	....	....	....	Westmoreland county.
270	61	180	....	270	....	282	....	238	....	....	Fayette county.
8,405	56	290	16,240	270	15,120	500	28,000	430	24,800	29,860	Fayette county.
6,492											
....	41	400	19,200	400	19,200	....	....	....	....	....	Allegheny county.
....	....	....	....	....	....	....	....	....	....	....	Westmoroland county.
....	....	....	....	....	....	....	....	....	....	....	Allegheny county.
4,200	16	500	8,000	500	8,000	500	8,000	515	8,256	....	Bedford county.
....	64	....	10,480	....	....	....	....	....	....	....	Allegheny county.
....	24	127	3,048	131	3,144	121	2,904	121	2,904	....	Allegheny county.
....	36	....	8,000	....	8,000	....	8,000	....	....	....	Westmoreland county.
....	25	....	....	....	....	....	....	....	....	....	Westmoreland county.
....	42	....	....	....	....	....	....	....	....	....	Allegheny county.
200	25	....	....	....	....	....	....	....	....	8,000	Washington county.
....	....	....	....	....	....	....	....	....	....	....	Fayette county.
....	42	450	20,250	....	....	....	....	....	....	....	Washington county.
....	51	360	18,360	380	19,380	400	20,400	370	18,870	....	Westmoreland county.
....	40	640	26,600	640	26,600	600	24,000	600	24,000	....	Westmoreland county.
....	74	210	15,540	235	17,390	225	16,550	210	15,440	....	Westmoreland county.
	11	215	2,365	310	3,410	300	3,300	300	3,300		
	11	215	2,365	310	3,410	300	3,300	300	3,300		
....	40	500	20,000	510	21,600	520	20,800	550	22,000	....	Westmoreland county.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
James Wesley,				May,	

This is all the accident that I have discovered during the month of May.

Respectfully yours,

WILLIAM WILCOX, *Inspector.*

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of May, 1878:

NATURE OF ACCIDENT.	REMARKS.
Hurt by fall of coal, ...	At Ocean Mines, W. L. Scott & Co.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
nia, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Shafton,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	180
Shaft, No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	..
Shaft, No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	2	..
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	.	..	..
Mine, No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	..	..	..
Larimer, No. 1,	Westmoreland Coal Company,	Bituminous,	Drift,	..	.	.
Irwin, North Side,	Westmoreland Coal Company,	Bituminous,	Drift,	2	..	2
South Side,	Westmoreland Coal Company,	Bituminous,	Drift,	..	..	..
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	1	1	..
Spring Hill,	Westmoreland Coal Company,	Bituminous,	Drift,	..	..	..
Ocean Mine,	W. L. Scott,	Bituminous,	Drift,	..	1	20
Millwood C. & C. Co.,	Millwood Coal and Coke Co.,	Bituminous,	Slope & shaft,	1	2	..
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	..	..	..
Arniou Mine,	Hurst, Stouer & Co.,	Bituminous,	Drift,	1	1	6
William Hodgson,	Lyuch & Robiuson,	Bituminous,	Drift,	2	..	..
Leechburg Colliery Co.	Leechburg Colliery Company,	Bituminous,	Drift,	..	..	..
Loyalhanna Coal Co.,	Loyalhanna Coal Company,	Bituminous,	Slope & shaft,	3	2	..
White Ball,	Youghiogheny Coal Company,	Bituminous,	Drift,	1	..	..
Greensburg Mines,	Greensburg Coal Company,	Bituminous,	Drift,	..	..	..
Knob Colliery,	Knob Coal Company,	Bituminous,	Slope & shaft,	1	1	30
Keystone,	Keystone Coal Company,	Semi-bitum,	Drift,	..	..	..
Umpire Mine,	J. S. Cunningham & Co.,	Bituminous,	Drift,	..	..	..
Mt. Braddock,	Hogsett, Watt & C.,	Bituminous,	Slope,	1	2	..
Lamont Mines,	Ewing, Hanna & Co.,	Bituminous,	Slope,	1	1	30
Sterling Mine,	Brown & Cochran,	Bituminous,	Drift,	..	.	..
Eldorado Mine,	Zuek & Henry,	Bituminous,	Drift,	..	..	..
Pitts. & Conn'le G. C. Co.	Pitts. & Conn'ville Gas Coal Co.,	Bituminous,	Slope & shaft,	6	4	..
Deer Park,	Mahoning Coke Company,	Bituminous,	Slope,	2	2	36
Conard Mine,	P. B. Wigton,	Semi-bitum,	Drift,	..	..	..
Lane Colliery,	Sandy Run Coal Company,	Semi-bitum,	Drift,	.	..	..
	John Carlin & Co.,	Bituminous,	Drift,	1	1	20
No. 3,	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift,	..	..	.
No. 4,	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift,	..	..	.
Plum Creek Mine,	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift,	..	..	..
Sandy Creek,	New York & Clevel'd Gas Coal Co.	Bituminous,	Drift,	..	..	..
Hampton Mine,	John McIntyre,	Bituminous,	Drift,	..	1	.
National Mine,	Consolidated C. M. Company,	Bituminous,	Drift,	1	.	.
Mansfield Coal & Coke Co.	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	1	1	12
Green Springs,	Redman & Fawcett,	Bituminous,	Drift,	1	1	35
Six Mile Ferry, No. 1,	H. B. Hays & Bro.,	Bituminous,	Drift,	..	1	10
Six Mile Ferry, No. 2,	H. B. Hays & Bro.,	Bituminous,	Drift,	1	..	..
Beck's Run,	H. B. Hays & Bro.,	Bituminous,	Drift,	2	.	..
Nixon Mines,	C. V. C. Co.,	Bituminous,	Drift,	..	..	..
Camphill Mine,	D. Steen & Sons,	Bituminous,	Drift,	..	..	..
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	..
Union Mines,	M. Graver & Co.,	Bituminous,	Drift,	..	3	28
Cornell & Werling,	W. H. Brown's heirs,	Bituminous,	Drift,	2	5	..
Chess Mine,	Gray & Bell,	Bituminous,	Drift,	..	3	..
Laurel Hill,	W. P. Rend & Co.,	Bituminous,	Drift,	..	..	..

respective Collieries in the First Bituminous Mine District of Pennsylva-
of June, 1878.

										Ventilation.							
										1st week.		2d week.		3d week.		4th week.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
4	31	8	5	44	4	.	2,472	2	45	220	9,900	205	9,225	140	6,300	200	9,000
4	186	20	36	242	14	. .	. . . .	4	31¼	410	12,686						
									28⅕	135	3,834						
									39¼	125	4,952						
4	200	22	55	277	13	3	. . . .	3	1⅛	1,000	1,200	1,000	1,200				
									106¾	215	22,800	215	22,800				
. .	154	26	42	222	15	5	. . . .	5	. . .	. . .	23,800	. . .	22,780	. . .	20,400	. . .	22,100
. .	228	5	37	270	10	. .	. . . .	4	. . .	520	28,300	570	30,500	565	30,200	620	3,480
. .	67	8	. .	. . . .	. .	. .	5,577	3									
2	65	. .	. . .	. . .	6	. .	2,840	5									
.	116	. .	. . .	. .	. .	. .	8,363	3									
2	107	. .	. . .	. . .	. .	. .	8,880	3									
. .	30	. .	. . .	. . .	. .	. .	2,462	5									
2	120	12	25	157	7	. .	7,600	2	40	153	6,120						
6	40	5	9	54	6	. .	. .	2	51	160	8,000						
. .	20	. .	3	23	2	1	3,529										
2	18	. .	22	40	4	3	3,565	3	49								
. .	45	7	13	65	4	1	1,600	4	. . .	331	4,055	324	3,932				
										272	4,964	253	4,617				
. .	70	. .	4	74	7	1	. . . .	5	48	170	8,160	150	7,200	150	7,200	170	8,160
4	75	10	9	94	9	.	. .	2	48	320	15,360	500	24,000	520	24,960	300	14,400
1	110	10	20	140	13	. .	4,000	3	56	440	12,000	440	12,000				
. .	18	. .	4	22	3	1	1,560	2	42	184	7,728	212	8,904	220	9,240	210	8,820
1	18	6	5	29	1	. .	1,600	2	60	83	4,980	82	4,920	90	5,400	82	4,920
. .	75		10	85	7	. .	2,600	5	72	200	14,400	200	14,400	175	12,600	200	14,400
.	40	2	10	52	4	2	1,600	4	10	125	. . . .	135					
2	30	. .	6	36	5	1	210	3	25	270	6,750	260	6,560	300	7,500	265	6,625
									30	240	7,200	250	7,500	275	8,250	255	7,650
2	37	4	5	46	1	1	4,079	4	42	80	3,696	80	3,696	80	3,696	80	3,696
										85	3,906	85	3,906	85	3,906	85	3,906
										60	2,856	60	2,856	60	2,856	60	2,856
. .	100	. .	15	115	12	6	19,000	3									
.	16	. .	3	19	2	. .	2,789	2	12	. . .	. . . .	. . .	. . . .	. . .	. . . .	250	3,048
7	78	2	109	189	5	5	12,733	2	64	150	11,872	175	13,424	35	4,833	115	9,699
2	32	2	4	38	4	2	5,632	3	56	200	11,200	210	11,760	200	11,200	210	11,760
									54	190	10,230	200	10,800	200	10,800	210	11,340
. .	32	8	5	45	4	1	2,665	2	12	280	5,490	270	5,292	290	5,688	340	6,669
. .	48	5	8	61	5	. .	2,500	2	48	100	4,800	100	4,800	100	4,800	120	5,760
1	20	2	3	25	2	. .	600	2	35	109							
. .	50	10	5	65	4	1	3,330	3	. . .	365	16,590	387	16,254	398	16,716		
.	164	19	10	193	8	1	9,968	4	. . .	1,177	43,784	1,184	44,275	1,178	43,730	1,106	40,997
. .	117	25	30	172	17	. .	4,063	10	42	100	5,625	. . .	. . . .	. . .	. . . .	75	4,219
. .	161	59	51	271	23	5	5,159	21	48	120	5,760	. . .	. . . .	117	5,616		
. .	120	10	19	149	8	. .	3,720										
1	90	3	19	112	9	3	3,064	4	42								
1	50	4	19	73	5	2	1,542	13	48								
2	125	6	23	148	8	. .	. . . .	4	56	320	17,980	275	15,420	276	12,640	266	14,940
. .	110	. .	28	138	5	1	2,426	10	52								
1	98	. .	31	129	5	. .	2,029	3	52								
2	163	47	210	15	2	. .	2,292	10	52								
. .	19	. .	4	23	1	1	680	2	36								
.	80	10	11	101	5	1	5,200	5	48	117	3,510	117	3,510	107	3,210	107	3,210
1	152	11	12	175	9	2	7,767	2									
3	77	10	30	177	4	8	2,700	13	42	. . .	. . . .	. . .	. . . .	160	6,720	140	5,880
4	170	20	32	222	8	1	5,000	4	40½								
5	97	25	37	159	12	. .	9,348⅓	2	. .	. . .	. . . .	. .	. . . .	. . .	. . . .	330	9,969
																275	9,396
. .	. . .	. .	. . .	. . .	. .	. .	. . . . .	3	56	180	10,472	240	13,776		.		

A STATEMENT *of the Names, Power, Capacty, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Shafton,	191	....	150	6,750	150	6,750	60	2,700	140	6,300
Shaft, No. 1,	....	....	430	22,500	....	....	....	....	....	....
Shaft, No. 2,	....	....	540	24,200	545	24,100	....	....	....	....
Coal Run,	....	....	450	24,500	430	22,000	390	20,400	425	22,000
Mine, No. 4,	....	....	580	29,000	560	31,000.	590	30,000	640	35,000
Larimer, No. 1,	....	....	....	....	....	....	....	....	....	....
Irwin, North Side,	....	....	....	1,500	....	....	....	1,800		
				2,000	....	....	....	1,500		
				6,200	....	....	....	5,500		
South Side,	....	....	....	7,800	....	....	....	....	....	15,300
				9,900						
				13,700						
Foster Slope,	....	....	....	14,100	....	....	....	....	....	....
Spring Hill,	....	....	....	4,000	....	....	....	2,600	....	....
				5,800	....	....	....	5,000		
Ocean Mine,	....	....	....	....	....	....	....	....	....	....
Millwood Coal and Coke Co.	....	....	150	7,000	155	7,500	....	....	....	....
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Arnion Mine,	....	....	....	....	....	....	....	....	....	....
William Hodgson,	....	....	....	....	....	....	....	....	....	....
Leechburg Colliery Co.,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Coal Company,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	....	9,000	....	9,000	....	9,000	....	9,000
Greensburg Mines,	206	....	....	....	....	....	....	....	....	....
Knob Colliery,	84¼	....	90	4,500	89	4,450	93	4,900	89	4,450
Keystone,	194	....	75	5,400	60	4,320	75	5,400	75	5,400
Umpire Mine,	....	....	120	....	125	....	....	....	....	....
Mt. Braddock,	....	....	100	6,300	90	5,670	130	8,190	95	5,985
Lamont Mines,	....	....	96	2,472	95	2,448	95	2,448	95	2,448
Sterling Mine,	....	....	....	....	....	....	....	....	....	....
Eldorado Mine,	....	....	....	....	....	....	....	....	....	....
Pitts. & Conn. Gas Coal Co.	....	....	150	11,872	175	13,424	35	4,833	155	9,699
Deer Park,	11,480	....	160	8,960	170	9,520	190	10,640	190	10,640
	10,755	....	170	8,330	180	8,820	200	9,800	180	8,820
Conard Mine,	295	....	110	4.311	100	3,924	115	4,509	120	4,707
Lane Colliery,	....	....	260	4,160	260	4,160	260	4,160	265	4,240
....	....	....	50	....	....	....	....	....	....	....
No. 3,	....	....	....	....	....	....	....	....	....	....
No. 4,	....	....	....	....	....	....	....	....	....	....
Plum Creek Mine,	....	....	....	....	40	1,900	....	....	30	1,440
Sandy Creek,	....	....	103	4,944	....	....	103	4,944	....	....
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
National Mine,	....	....	....	....	....	....	....	....	....	....
Mansfield Coal and Coke Co.	....	....	....	....	....	....	....	....	....	....
Green Springs,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 1,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 2,	....	....	....	....	....	....	....	....	....	....
Beck's Run,	....	....	....	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Camphill Mine,	....	....	117	3,510	117	3,510	107	3,210	107	3,210
Pine Run,	....	....	....	....	....	....	....	....	....	....
Union Mines,	....	....	....	....	....	....	....	....	....	....
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Chess Mine,	....	....	....	....	....	....	....	....	....	....
Laurel Hill,	....	....	250	8,120	280	7,980	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												HOW VENTILATED.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	
21	22	23	24	25	26	27	28	29	30	31	32	
125	98	110	10,780	105	10,200	70	6,860	100	9,800	9,432	4	Steam exhaust.
...	51	445	22,795	...	...	...	...	...	...	...	...	Fan 12 feet in diameter.
...	40	600	24,000	600	24,000	...	...	...	...	...	...	Fan 12 feet in diameter.
...	34	700	23,800	670	22,780	600	20,400	650	22,100	...	...	By furnace.
...	74	300	22,200	320	23,680	310	22,940	...	...	...	...	By furnace.
	11	320	3,520	340	3,740	330	3,630	...	...	...	...	By furnace.
	11	320	3,520	340	3,740	330	3,630	...	...	...	...	By furnace.
...	...	...	13,945	...	14,755	...	17,140	...	12,500	...	...	By furnace.
...	...	...	...	...	19,600	...	22,700	...	24,500	...	...	By furnace.
...	...	...	22,800	...	25,000	...	22,000	...	25,700	...	...	Fan 6 feet in diameter.
...	...	...	...	...	...	...	...	...	...	...	...	Furnace.
...	35	180	6,300	...	...	...	...	...	...	...	...	By furnace.
153	176	40	7,040	...	...	...	...	...	...	...	...	Fan 12 feet in diameter.
...	...	...	...	...	...	...	...	...	...	...	...	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	...	Natural.
...	30	350	10,500	321	9,630	...	...	...	...	10,065	...	Furnace.
...	...	...	...	...	...	...	...	...	...	...	...	Natural.
...	...	...	...	...	...	...	...	...	...	...	...	Steam exhaust.
...	36	...	7,000	...	7,000	...	7,000	...	7,000	...	5	Furnace and steam exh.
...	25	156	6,552	180	7,560	184	7,728	185	7,770	176	1	Natural.
...	30	167	5,010	165	4,950	181	5,435	165	4,950	...	5	Steam exhaust.
...	72	200	14,400	200	14,400	200	14,400	175	12,600	13,950	2	Natural.
...	56	115	...	120	...	...	...	...	...	...	5	Natural.
...	30	500	15,000	500	15,000	525	15,750	520	15,600	...	5	Steam exhaust.
...	48	220	11,088	210	10,560	210	10,560	...	...	...	2	Steam exhaust.
...	...	...	...	...	...	...	...	...	...	...	15	Natural.
...	49	...	...	...	...	...	...	20	980	...	1	Natural.
...	...	140	11,251	145	11,567	30	4,522	100	8,768	...	...	Steam exhaust.
9,940	56	430	24,080	440	24,640	430	24,080	430	24,080	24,220	4	Steam exhaust.
8,942												
111¼	42	120	5,490	110	4,668	120	5,490	130	5,520	...	3	Natural.
...	16	500	8,000	500	8,000	500	8,000	500	8,000	...	3	By furnace.
...	35	9	...	...	...	...	...	...	...	...	1	Natural.
...	...	350	15,750	365	16,425	378	17,010	386	17,370	...	...	By furnace.
...	...	972	35,812	987	36,052	1,013	36,204	908	33,513	...	...	Natural.
...	42	...	...	50	2,813	...	...	50	2,813	...	10	Natural.
...	48	100	4,800	...	...	100	4,800	...	...	4,800	18	Natural.
...	...	...	...	...	...	...	...	...	...	...	...	Natural.
...	25	...	...	...	...	...	...	...	...	...	3	Furnace.
...	48	100	4,800	...	...	...	...	...	...	...	3	Natural.
...	56	274	15,112	310	17,020	275	12,512	407	22,875	...	...	Natural.
...	...	...	...	...	...	...	...	...	...	...	3	Furnace
...	...	...	...	...	...	...	...	...	...	...	2	Natural.
...	...	...	...	...	...	...	...	...	...	...	7	Natural.
...	...	...	...	...	...	...	...	...	...	...	2	By furnace.
...	24	107	2,568	107	2,568	103	2,472	103	2,472	...	6	Natural.
...	...	...	...	...	...	...	...	...	...	...	8	By furnace.
...	...	...	...	...	...	130	5,460	120	4,846	...	2	Natural.
...	50	...	...	...	...	...	...	...	...	...	16	Natural.
...	...	...	...	...	...	...	...	800	30,000	...	5	By fan 16 feet in diam.
...	...	210	9,114	...	...	...	...	...	...	...	...	By furnace.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
James Shestake, ...	10	Single, . . .	. . . .	June 17, . . .	June 18, . . .
Jacob Cole, ...	37	Married, . .	. . . .	June 21, . . .	June 22, . . .
George W. Robinson, .	57	Married, . .	. . . .	June 21, . . .	June 22, . . .
Joseph Kelly, ...	55	Married, . .	. . . .	June 7, . . .	June 19, . . .
John Cowan, ...	65	Married, . .	. . . .	June 4, . . .	June 14, . . .
George Hodges, ...	19	Single, . . .	. . . .	June 24, . . .	July 11, . . .
Michael Miller, ...	15	Single, . . .	. . . .	June 24, . . .	. . . .
Hugh McGahan, ...	24	Single, . . .	. . . .	June 21, . . .	. . . .
George Dougherty, . .	26	Married, . .	. . . .	June 23, . . .	. . . .
Conard Kline, ...	60	Married, . .	. . . .	June 7, . . .	. . . .
William Clark, ...	28	Single, . . .	. . . .	June 13, . . .	. . . .
Edward Larua, ...	. . .	. . . .	. . . .	June 12, . . .	. . . .
Richard Dawson, . . .	. . .	. . . .	. . . .	June 25, . . .	June 25, . . .

James Shestake went in the mine with his father, Albert Shestake. The slate falling on him, he died in three hours. No inquest was held. He did not work in the mine, but to please him his father had taken him in with him.

Jacob Cole, killed. Inquest held by coroner. Verdict, that the deceased came to his death by coal striking him on the head, through no neglect of the Penn Gas Coal Company, or any of its superintendents.

George W. Robinson, killed. Was dead when found. Inquest by coroner. Verdict, that he came to his death by slate falling on him, through no neglect of the Penn Gas Coal Company, or any of its superintendents.

Joseph Kelly, killed. No inquest was held. Investigation by me, and found he was working in a room with William Hoberlein; had neglected to set up timber, when the slate fell. He lived about twelve hours.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, Collieries, &c., in said district, for the month of June, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed,	At Shaft No. 2, Penn Gas Coal Company, by falling slate.
Killed,	At Shaft No. 2, Penn Gas Coal Company, by falling coal.
Killed,	At Coal Run Mine, Penn Gas Coal Company, by falling slate.
Killed,	At White Ball Mines, Youghiogheny Coal Company, by falling slate.
Killed,	At Ocean Mine, W. L. Scott & Co., by falling coal and slate.
Killed,	At Conard Mine, R. B. Wigton, by falling rock.
Leg broken by wagons,	At Irwin Mine, Northside, Westmoreland Coal Company.
Hurt by wagons,	At Cornell & Werling Mine, W. H. Brown heirs.
Arm broken; kicked by mule,	At Union Coal Works, M. Graver & Co.
Ribs broken by falling slate,	At Green Springs Mine, Redman & Fawcett.
Hand hurt by wagons,	At Green Springs Mine, Redman & Fawcett.
Hurt by falling slate,	At Sandy Creek Mine, No. 2, New York and Cleveland Gas Coal Company.
Leg broken by falling slate,	At Cliff Mine, Scully & Co.

John Cowen, killed. No inquest was held. Investigation by me, and found he was working with his son, John Cowen, when suddenly a fall of slate and coal occurred, injuring him so that he died in three days. John Cowen, junior, said he blamed no one for the accident.

George Hodges, killed by a fall of rock, was working with John Smith, when the rock fell, killing him instantly. Inquest held by coroner. Verdict, that he came to his death by a fall of rock, commonly termed a pot-hole, and that it was neglect of propping. On investigation, showed that in all the above cases the men were well supplied with timber.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Eldorado,	Zuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Union Mine.	M. Graver & Co.,	Bituminous,	Drift,	. .	3	28
Oak Ridge Mine,	Oak Ridge Coal Co., (limited,)	Bituminous,	Drift,	. .	. .	. .
Sterling Mine,	Brown & Cochran,	Bituminous,	Drift,	. .	. .	. .
Cumberland Mine,	T. M. Williams,	Semi-bitum.	Drift,	. .	. .	. .
William Hodgson,	Lynch & Robinson,	Bituminous,	Drift,	1	. .	. .
Apollo,	Laufman & Co.,	Bituminous,	Drift,	1	. .	. .
Laurel Hill,	W. P. Rend & Co.,	Bituminous,	Drift,	1	. .	. .
Millwood C. and C. Co.,	Millwood Coal and Coke Co.,	Bituminous,	Slope & shaft,	1	1	120
Deer Park,	Mahoning Coke Company,	Bituminous,	Drift,	2	2	36
Knob Colliery,	Knob Coal Company,	Bituminous,	Shaft & slope,	1	1	30
Loyalhanna Coal Co.,	Loyalhanna Coal Company,	Bituminous,	Slope & shaft,	3	1	. .
Shafton Mine,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	. .	. .	. .
Mount Braddock,	Hogsett. Watt & Co.,	Bituminous,	Slope,	1	2	. .
National Mine,	Consolidated Coal Company,	Bituminous,	Drift,	1	. .	. .
Mount Equity,	Kimble Coal and Iron Company,	Semi-bitum.	Drift,	. .	. .	. .
Cornell & Werling's,	W. H. Brown's heirs,	Bituminous,	Drift,	2	5	. .
Mine No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	.
Shaft No. 2,	Penn Gas Coal Company,	Bituminous,	Slope & shaft,	1	1	. .
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Osceola,	Osceola Coal Company,	Bituminous,	Drift,	. .	. .	. .
Larimer, No. 1,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	1	1	. .
South Side Mine,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Spring Hill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Greensburg Mine,	Greensburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Mansfield C. and C. Co.,	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	. .	1	12
Lemont Mines,	Ewing, Hanna & Co.,	Bituminous,	Slope,	1	1	30
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Eureka Mine,	Fox, Kifer & Co.,	Bituminous,	Drift,	. .	. .	. .
Chess Pit,	Gray & Bell,	Bituminous,	Drift,	. .	4	. .
Hampton Mine,	John McIntyre,	Bituminous,	Drift,	.	1	. .
White Ball,	Y. C. H. Coal Company,	Bituminous,	Drift,	1	. .	. .
Leechburg Colliery,	Leechburg Coal Company,	Bituminous,	Drift,	.	. .	. .
Lain Colliery,	Morley & Langdon,	Semi-bitum.	Drift,	.	. .	. .
Armstrong's Mine,	Charles H. Armstrong,	Bituminous,	Drift,	. .	. .	. .
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	2	. .	. .
P. and C. G. C. and C. Co.,	P. and C. Gas Coal and Coke Co.,	Bituminous,	Slope & shaft,	6	. .	. .
No. 4, N. Y. and C. G. C. Co.	N. Y. and C. Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
No. 3, N. Y. and C. G. C. Co.	N. Y. and C. Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of July, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	16	3	3	22	1	. .	2,210	2	12	. . .	. . . .	. .	. . . .	. . .	. .	. . .	3,456
3	100	15	. . .	115	5	8	3,450	16	48	200	8,560	150	7,176	160	7,544	150	7,176
. .	45	. .	10	55	5												
. .	70	12	12	94	9	3	14,000										
.	20	4	7	31	1	. .	1,200	3									
. .	59	5	11	75	4	1	1,800	4	. . .	321	3,952	. . .	. . . .	243	2,976	253	3,090
										156	2,852	. . .	. . . .	185	3,376	166	3,320
										159	1,908	. . .	. . . .	146	1,752	151	1,812
1	20	. .	4	24	1	1	2,500										
1	75	10	15	100	6	1	4,000	2	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	180	
4	40	5	7	52	6	. .	. . . .	2	51	150	7,500						
2	28	3	4	35	4	2	. . . .	3	54	190	10,260	210	11,340	200	10,800	210	11,340
1	16	8	5	29	1	. .	1,000	2	60	100	6,000	98	5,880	96	5,760	100	6,000
2	70	10	13	93	10	. .	. . . .	2	48	320	15,360	200	9,600	220	10,560	360	17,280
4	31	8	5	44	4	.	. . . .	2	45	250	11,250	220	9,900	240	10,800	200	9,000
. .	20	. .	3	23	2	1	3,204										
2	33	. .	6	39	5	2	6,240	2	25	280	7,000	285	7,125	284	7,100	286	7,150
1	80	6	19	106	9	3	3,000	2	35								
. .	29	3	8	40	3	. .	1,365	2	38	. . .	. . . .	. .	. . .	. . .	. . . .	280	9,240
4	60	5	15	80	3	1	1,384	4	40¼								
. .	228	5	37	270	40	. .	. . . .	3	. . .	570	22,800	640	26,000	600	24,800		
4	200	22	55	277	13	3	. . . .	3	106¼	470	24,000	490	25,200	490	25,200	490	25.200
. .	150	20	42	212	15	5	. . . .	9	. . .	. . .	18,700	. . .	19,720	. . .	17,680	. . .	20,740
. .	140	. .	. . .	. . .	. .	. .	7,852										
. .	69	8	. . .	77	. .	. .	2,440										
2	110	. .	. . .	. . .	. .	. .	7,808	. .	. . .	. . .	24,100	. . .	23,800	. . .	24,200		
. .	110	. .	. . .	. . .	. .	. .	3,769										
. .	26	5	. . .	. . .		. .	2,468										
. .	18	1	4	23	3	1	1,764	2	48	92	4,416	80	3,840	76	3,648	112	5,376
2	52	5	21	76	5	2	3,121	13	48	120	5,760	110	5,280	120	5,760	100	4,800
2	37	4	5	46	4	1	3,876	4	42	75	11,046	75	11,046	80	12,130	80	12,130
										90	. . . .	90	. . . .	85	. . . .	85	
										60	. . . .	60	. . . .	65	. . . .	65	
. .	26	1	4	31	1	1	1,200	2	42								
. .	18	2	3	23	1	1	5,361										
7	97	25	37	159	12	. .	8,704	2	29	325	9,453	275	8,001				
								2	10	550	5,775	247	7,410				
. .	145	8	18	144	. .	. .	1,060	3									
1	100	10	22	132	12	. .	5,769	3	56	448	12,000	448	12,000	448	12,000	448	12,000
. .	60	7	4	71	5	. .	4,000	. .	48	170	8,160	150	7,200	180	8,640	180	8,640
. .	42	5	. . .	47	4	. .	2,500	2	48	75	3,600	75	3,600	75	3,600	75	3,600
.	35	10	14	56	4	. .	1,680	3	36								
2	15	. .	19	34	3	1	2,500	2	42								
7	77	2	110	189	5	5	17,103	4	64	155	12,482	145	11,562	115	9,699	110	9,389
. .	159	14	10	188	7	1	2,337	. .	. . .	1,065	39,897	1,112	41,622				
. .	50	10	5	65	4	1	779	2	. . .	380	15,960	393	16,506				

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading	Number of cubic feet per minute passing at or near face of head'g
1	11	12	13	14	15	16	17	18	19	20
Eldorado,	....	....	....	....	....	....	....	....	....	....
Union Mine,	165	....	....	....	....	....	....	....	....	....
Oak Ridge C. Co., (limited,)	....	....	....	....	....	....	....	....	....	....
Sterling Mine,	....	....	....	....	....	....	....	....	....	....
Cumberland Mine,	....	....	....	....	....	....	....	....	....	....
William Hodgson,	197 7-9	....	....	....	....	....	....	....	....	....
Apollo,	....	....	....	....	....	....	....	....	....	....
Laurel Hill,	....	....	....	....	....	....	....	....	260	....
Millwood Coal and Coke Co.	....	....	150	6,200	....	....	....	....	....	....
Deer Park,	10,935	....	180	10,080	170	9,520	160	8,960	180	10,080
Knob Colliery,	....	....	75	3,900	73	3,766	72	3,744	75	3,900
Loyalhanna Coal Company,	....	....	....	....	....	....	....	....	....	....
Shafton Mine,	228	....	117	5,265	109	4,905	120	5,400	110	4,950
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Mount Braddock,	284	....	165	6,950	170	7,160	162	6,804	171	7,182
National Mine,	....	....	....	....	....	....	....	....	....	....
Mount Equity,	....	....	....	....	....	....	....	....	....	....
Cornell & Werling's,	....	....	....	....	....	....	....	....	....	....
Mine No. 4,	....	....	490	22,500	580	26,000	550	24,500	....	....
Shaft No. 2,	....	....	550	24,000	570	25,000	560	24,800	580	25,200
Coal Run,	....	....	420	18,700	490	19,800	400	17,500	500	20,700
Osceola,	....	....	....	8,750	....	....	....	....	....	11,000
Larimer, No. 1,	....	....	....	....	....	....	....	....	....	....
Foster Slope,	....	....	....	....	....	....	....	....	....	....
Southside Mine,	....	....	....	13,100	....	....	....	....	....	12,300
Spring Hill,	....	....	....	4,500	....	3,000	....	4,000	....	4,500
Greensburg Mine,	90	....	....	....	....	....	....	....	....	....
Mansfield Coal and Coke Co.	110	....	90	4,320	80	3,840	....	....	....	....
Lemont Mines,	11,588	....	95	2,496	95	2,496	100	2,640	100	2,640
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Eureka Mine,	....	....	....	....	....	....	....	....	....	....
Chess Pit,	....	....	120	4,950	130	5,752	....	....	....	....
			5	....	375	3,937				
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
White Ball,	....	....	....	9,000	....	9,000	....	9,000	....	9,000
Leechburg Colliery,	....	....	....	....	....	....	....	....	....	....
Lain Colliery,	3,600	....	200	3,200	300	3,200	....	....	....	....
Armstrong's Mine,	....	....	....	....	....	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
P. and C. G. C. and C. Co.,	131¼	....	100	8,708	140	11,251	100	8,768	100	8,768
No. 4, N. Y. and C. G. C. Co.,	....	....	....	....	....	....	....	....	....	....
No. 3, N. Y. and C. G. C. Co.,	....	....	....	....	....	....	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	HOW VENTILATED.
21	22	23	24	25	26	27	28	29	30	31	32	
. . . .	49	30	1,568	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	1	Natural.
. . . .	42	150	7,176	120	5,934	140	6,174	135	5,964	136¼	4	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	15	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	30	360	10,800	259	7,770	259	7,770	292	8,760	. . . .	3	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	245	. . . .	. . . .	3	Furnace.
. . .	136	35	4,760	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Fan 12 feet diameter.
9,660	56	420	23,520	430	24,080	420	23,520	430	24,080	23,800	. .	Steam exhaust.
73¾	30	201	6,030	197	5,910	193	5,790	201	6,030	5,940	5	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Steam exhaust.
114	98	125	12,250	110	10,780	115	11,270	110	10,780	11,270	4	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
167	30	480	14,400	490	14,700	488	14,640	492	14,760	. . . .	3	Steam exhaust.
. . . .	35	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Furnace.
. . . .	20	400	8,000	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	50	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	16	Natural.
. . . .	65	350	22,750	400	26,000	380	24,700	. . .	. . . .	. . . .	.	Furnace.
. . . .	40	600	21,000	630	25,000	630	25,200	630	25,200	. . . .	20	Fan 12 feet diameter.
. . . .	34	550	18,700	580	19,720	520	17,680	610	20,740	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	12,400	. . .	12,425	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	21,200	. . . .	. .	Fan 6 feet diameter.
. . . .	. . .	. . .	218,000	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	.	Furnace.
. . . .	25	156	3,900	144	3,600	120	3,000	180	4,500	3,750	1	Natural.
80	48	120	5,760	110	5,280	120	5,760	100	4,800	. . . .	3	Natural.
. . . .	48	220	10,752	220	10,752	225	10,944	225	10,944	10,848	2	Steam exhaust.
. . . .	. . .	. . .	. . . .	. .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	41¼	735	30,318	575	22,632	. . .	. . . .	. . .	. . . .	. . .	. .	Fan 16 feet diameter.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	36	3,000	9,000	3,000	9,000	3,000	9,000	3,000	9,000	. . .	7	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	16	350	5,600	350	5,600	. .	. . . .	. . .	. . . .	. . . .	. .	Small furnace.
. . . .	36	. . .	. . . .	. . .	. . . .	. .	. . . .	. . .	. . . .	. . . .	. .	Small furnace.
. . . .	18	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
110	. . .	100	8,768	140	11,251	100	8,768	100	8,768	110	. .	Steam exhaust.
. . . .	. .	824	30,548	930	34,430	. . .	. . . .	. . .	. . . .	. . .	. .	Natural.
. . . .	. . .	350	15,750	382	14,760	. .	. . . .	. . .	. . . .	. . . .	. .	Furnace.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
William Filmore, . . .	. . .	Married, . .	. . . .	July 9, ...	July 15, . . .
James McLaughlin, . .	. . .	Married, . .	. . . .	July 20, . . .	. . . .
George Hildehand, . .	. . .	. . . .	. . . .	July 12, . . .	. . . .
Philip Enterpen, . . .	. . .	Single, . .	. . . .	July 16, . . .	. . . .
George Polin, ...	63	Married, . .	. . . .	May 9, ...	. . . .
Joseph Hahn, ...	. . .	Single, . .	. . . .	July 5, ...	. . . .
Thomas Renshaw, . . .	. . .	Married, . .	. . . .	July 5, ...	. . . .
James Reed, ...	. . .	Married, . .	. . . .	July 5, ...	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of July, 1878:

NATURE OF ACCIDENT.	REMARKS.
Both legs and jaw broken,	At the Keystone mine, W. H. Brown's heirs.
Injured by slate,	At the Shafton mine, Shafton Coal Company.
Injured by fall of slate,	At Appollo Iron Company's mine, at Appollo.
Leg broken by fall of slate,	At Fort Pitt Coal Company's mine.
Hurt by falling slate,	At Chess Pit, Gray & Bell, while drawing timber.
Foot severely crushed,	At Chess Pit, Gray & Bell, riding on full cars against orders.
Hurt slightly by car running off the the track,	At Chess Pit, Gray and Bell.
Ribs broken from same cause and at same time.	

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Mansfield Coal & Coke Co.	Mansfield Coal & Coke Company,	Bituminous,	Drift, ...	.	1	12
Pine Run, ...	James Lynn & Co., ...	Bituminous,	Drift, ...	1	1	. .
Street's Run, ...	I. D. Risher, ...	Bituminous,	Drift, ...	. .	. .	. .
Union Mines, ...	Hurst, Stoner & Co., ...	Bituminous,	Drift, ...	2	1	6
Eldorado, ...	Zuck & Henry, ...	Bituminous,	Drift, ...	. .	. .	. .
Lain Colliery, ...	Langdon & Morley, ...	Semi-bitum.	Drift, ...	. .	. .	. .
Leechburg Colliery, . . .	Leechburg Coal Company, ...	Bituminous,	Drift, ...	. .	. .	.
Cumberland Mine, . . .	J. W. Williams.	Semi-bitum.	Drift, ...	. .	. .	. .
Mount Braddock, ...	Hogsett, Watt & Co., ...	Bituminous,	Slope, ...	1	2	. .
Knob Colliery, ...	Knob Coal Company, ...	Bituminous,	Slope, ...	1	1	30
Brown & Cochran Mine,	Brown & Cochran, ...	Bituminous,	Drift, ...	. .	. .	. .
Rising Sun, ...	Markle & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Millwood Shaft, ...	Millwood Coal and Coke Company	Bituminous,	Slope & shaft,	1	2	. .
Oak Ridge Mine, ...	Oak Ridge Coal Co., (limited,) .	Bituminous,	Drift, ...	. .	. .	. .
Mahoning Coal & Coke Co	Mahoning Coal and Coke Co., . .	Bituminous,	Slope, ...	2	2	36
Keystone Mine, ...	Keystone Coal Company, ...	Semi-bitum.	Drift, ...	. .	. .	. .
Lamont Mines, ...	Ewing, Hanna & Co., ...	Bituminous,	Slope, ...	1	1	30
Larimer's Mine, ...	Westmoreland Coal Company, .	Bituminous,	Drift, ...	. .	. .	. .
Springhill, ...	Westmoreland Coal Company, . .	Bituminous,	Drift, ...	. .	. .	. .
Foster Slope, ...	Westmoreland Coal Company, . .	Bituminous,	Slope, ...	1	1	. .
Osceola Mine, ...	Osceola Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Shaft No. 1, ...	Penn Gas Coal Company, ...	Bituminous,	Shaft, ...	1	1	. .
Coal Run, ...	Penn Gas Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Shaft No. 2, ...	Penn Gas Coal Company, ...	Bituminous,	Shaft, ...	1	1	. .
Mine No. 1, ...	Boyle & Hazlett, ...	Bituminous,	Slope, ...	1	1	60
Mine No. 2, ...	Boyle & Hazlett, ...	Bituminous,	Slope, ...	1	1	60
Loyalhanna Shaft, . . .	Loyalhanna Coal Company, . . .	Bituminous,	Shaft, ...	2	1	. .
Saxman Mine, ...	William Saxman & Co., ...	Bituminous,	Drift, ...	. .	1	. .
Old Pit, ...	Pittsburgh & Castle Shannon C. Co	Bituminous,	Drift, ...	. .	. .	. .
Hampton Mine, ...	John McIntyre, ...	Bituminous,	Drift, ...	. .	1	
Union Mine, ...	M. Graver & Co., (limited,) . . .	Bituminous,	Drift, ...	.	3	28
Nixon Mines, ...	Chartiers Valley Coal Company, .	Bituminous,	Drift, ...	. .	. .	. .
Buckeye Mine, ...	John M. Cochran, ...	Bituminous,	Drift, ...	2	.	. .
Painter Mine, ...	S. B. White, ...	Bituminous,	Drift, ...	1	. .	. .
Greensburg Mines, . . .	Greensburg Coal Company, . . .	Bituminous,	Drift, ...	. .	. :	. .
Shafton, ...	Shafton Coal Company, ...	Bituminous,	Shaft, ...	1	2	100
P. & C. G. C. & C. Co., .	Pitts. & Conn. G. C. & C. Co., . .	Bituminous,	Slope & shaft,	6	4	. .
Mount Equity, ...	Kimble Coal and Iron Company,	Semi-bitum.	Drift, ...	. .	. .	. .
Cornell & Werling, . .	William H. Brown's Heirs, . . .	Bituminous,	Drift, ...	2	5	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of August, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	55	4	21	80	6	2	1,085	13	48	90	4,320						
1	146	12	11	169	9	2	7,910										
. .	113	10	11	136	7	. .	4,840	4	. . .	*							
2	18	. .	23	41	4	2	2,957	4	49	*							
. .	15	. .	3	18	2	1	1,820	2	12	. . .	. . . . .	. . .	. . . . .	. . .	. . . . .	200	3,036
. .	48	5	. . .	53	5	. .	3,000	2	48	100	4,800	100	4,800	100	4,800	100	4,800
. .	56	8	4	68	4	. .	3,800	5	48	190	9,120	170	8,160	180	8,640	170	8,160
. .	20	4	6	30	2	. .	1,500	4	96	*							
2	33	1	6	40	5	1	6,240	2	25	280	7,000	285	7,125	284	7,100	286	7,150
									30	250	7,500	255	7,650	254	7,620	256	7,680
1	16	5	5	26	1	. .	700	2	60	86	5,160	85	5,100	85	5,100	86	5,160
. .	90	. .	12	102	10	6	12,000	3	. . .	*							
. .	20	. .	3	23	2	1	3,146	3	. .	*							
6	45	8	9	62	6	. .	. . . .	2	52	250	12,750	225	11,250	240	12,240	250	12,750
. .	52	. .	10	62	5	. .	. . . .	3	48	190	9,120	210	10,080	180	8,720	225	10,800
									30	240	7,200	260	7,800	230	7,920	300	9,000
2	19	1	2	22	2	2	6,202	3	56	210	11,760	220	12,320	200	11,200	230	12,880
									54	200	10,800	210	11,340	200	10,800	210	11,340
. .	78	. .	16	94	7	. .	3,200	3	72	150	10,800	125	9,000	150	10,800	150	10,800
2	35	4	5	44	4	1	3,801	4	42	75	3,486	75	3,486	80	3,696	80	3,696
. .	67	8	6	81	. .	. .	6,070										
. .	32	5	3	40													
2	108																
. .	154	. .	16	170	16	. .	8,622	4									
2	186	20	36	244	14	. .	. . . .	3	31¼	. . .	. . . . .	150	4,725	100	3,125	125	3,957
									28¼	. . .	. . . . .	250	7,080	300	8,500	280	7,930
									39½	. . .	. . . . .	240	9,480	250	9,875	240	9,480
. .	154	26	42	222	15	5	. . . .	9	.	. . .	22,780	. .	23,800	. .	21,420	. . .	25,500
4	200	22	55	277	13	3	. . . .	3	106½	450	24,800	430	24,200	470	25,200	455	24,900
2	20	2	4	26	3	2	4,804	2									
2	30	1	5	36	4	2	5,451	2									
4	70	10	13	83	10	. .	. . . .	2	48	230	11,040	225	10,800	230	11,040	210	10,080
1	26	3	5	34	3	. .	2,825	2									
. .	59	3	10	72	6	3	5,600	3	63	100	6,300	93	5,859	100	6,300	97	6,111
1	84	6	15	105	4	. .	1,154	3									
3	101	20	. . .	121	11	4	6,145	11	42	150	7,130	140	6,174	150	7,130	140	6,174
. .	10	. .	2	12	1	1	120	2	42								
2	15	. .	1	33	3	1	2,480	2									
1	22	. .	30	52	2	2	3,025	5	29	250	7,250						
.	18	. .	4	22	1	1	1,750	2	48	104	4,992	100	4,800	110	5,328	92	4,416
4	36	7	4	47	3	. .	5,259	2	. . .	310	13,950	300	13,500	200	9,000	210	9,450
7	75	3	105	183	5	5	14,742	4	64	140	11,251	150	11,872	110	9,389	115	9,699
. .	32	3	3	38	5	1	2,532	2	40	200	7,272	190	6,095	190	6,095	190	6,095
									50								
4	160	10	29	199	7	1	4,128	4	40½								

* Air not measured.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Mansfield,	....	....	80	3,840	....	....	....	....	....	....
Pine Run,	....	....	....	....	....	....	....	....	....	....
Street's Run,	....	....	....	....	....	....	....	....	....	....
Union Mines,	....	....	....	....	....	....	....	....	....	....
Eldorado,	....	....	....	....	....	....	....	....	....	....
Lain Colliery,	....	....	175	2,900	175	2,900	175	2,900	175	2,900
Leechburg Colliery,	177	....	*	....	....	....	....	....	....	....
Cumberland Mine,	....	....	....	....	....	....	....	....	....	....
Mount Braddock,	284	....	165	6,950	170	7,160	162	6,804	171	7,182
	254	....	177	7,450	181	7,618	174	7,308	183	7,686
Knob Colliery,	85½	....	73	3,796	72	3,644	72	3,644	73	3,796
Brown & Cochran,	....	....	....	....	....	....	....	....	....	....
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Millwood Shaft,	....	....	225	9,000	220	8,800	230	9,200	240	9,600
Oak Ridge Mine,	....	....	200	8,000	180	7,200	140	5,600	192	7,680
Mahoning Coal & Coke Co.,	....	....	190	9,310	190	9,310	190	9,310	190	9,310
			180	10,080	180	10,080	180	10,080	200	11,200
Keystone Mine,	143¾	....	60	3,360	50	2,800	60	3,360	60	3,360
Lamont Mines,	....	....	95	2,448	95	2,448	96	2,472	96	2,472
Larimer's Mine,	....	....	....	....	....	....	....	....	....	....
Springhill,	....	....	....	6,800	....	8,250	....	....	....	....
Foster Slope,	....	....	....	16,900	....	16,750	....	16,500	....	16,500
Osceola Mine,	....	....	....	10,230	....	....	....	8,750	....	9,380
Shaft No. 1,	....	....	....	....	445	22,000	450	20,400	430	21,300
Coal Run,	....	....	520	22,000	570	24,000	500	21,000	550	25,500
Shaft No. 2,	....	....	500	25,000	485	24,200	490	24,800	510	25,100
Mine No. 1,	....	....	....	....	....	....	....	....	....	....
Mine No. 2,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Shaft,	....	....	....	....	....	....	....	....	....	....
Saxman Mine,	....	....	....	....	....	....	....	....	....	....
Old Pit,	....	....	82	3,445	78	3,676	80	3,360	82	3,445
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
Union Mine,	....	....	....	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Painter Mine,	....	....	200	8,000	....	....	....	....	....	....
Greensburg Mines,	101½	....	....	....	....	....	....	....	....	....
Shafton,	255	....	190	8,550	200	9,000	160	7,200	150	6,750
Pitts. & Conn. G. C. & C. Co.	129	....	125	10,320	130	10,630	90	8,147	100	8,768
Mount Equity,	....	....	200	3,422	50	1,562	110	3,437	200	3,482
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....

Not measured.

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	MINE—HOW VENTILATED.
21	22	23	24	25	26	27	28	29	30	31		
. . . .	48	90	4,320	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	8	Furnace, 20 by 16 feet.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Furnace.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	49	. . .	. . . .	. . .	. . . .	. . .	. . . .	62	3,822	. . . .	1	Natural.
. . . .	16	500	8,000	500	8,000	500	8,000	500	8,000	. . . .	3	Furnace, small.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Natural.
167	30	480	14,400	490	14,700	488	14,640	492	14,760	457	. .	Steam exhaust.
171												
72¼	30	173	5,190	172	5,160	172	5,160	173	5,190	5,173	6	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	.	. . . .		. . . .	. . .	15	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Natural.
. . . .	49	80	10,400	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Fan, 12 feet diameter.
	84											
. . . .	40	520	20,800	440	18,600	410	16,400	560	22,400	. . . .	3	Furnace, 6 by 25 feet.
9,310	56	480	24,640	450	25,200	430	24,080	460	25,760	24,920	. .	Steam exhaust.
10,360												
57¼	72	150	10,800	340	24,480	200	14,400	250	18,000	16,920	. .	Natural.
. . . .	48	210	10,560	210	10,560	220	11,088	220	11,088	10,824	2	Steam exhaust.
. . . .	. . .	. . .	12,440	. . .	14,340	. . .	14,540	. . .	18,810	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Fan, 6 feet diameter.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural.
. . . .	57	. . .	. . . .	440	22,440	400	20,400	415	21,565	. . . .	25	Fan, 12 feet diameter.
. . . .	34	670	22,780	700	23,800	630	21,420	750	25,500	. . . .	30	Furnace, 6 by 24 feet.
. . . .	40	625	25,000	600	24,000	625	25,000	625	25,000	. . . .	20	Fan, 12 feet diameter.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	6	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	5	Natural.
83	56	108	6,168	105	5,880	107	5,992	112	6,272	108	. .	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	.	Natural.
. . . .	42	130	5,754	125	5,628	140	6,174	130	5,796	5,848	3	Natural.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Small furnace.
. . . .	25	. . .	. . . .	. . .	. . . .	. . .	. . . .	.	. . . .	. . . .	2	Natural.
. . . .	56	150	7,400	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	10	Natural.
. . . .	25	144	3,600	152	3,800	140	3,500	140	3,500	3,600	1	Natural.
175	98	155	15,190	150	14,700	100	9.800	105	10,290	. . . .	4	Steam exhaust.
111	. . .	125	10,320	130	10,630	90	8,147	100	8,768	111	. .	Natural & steam exhaust.
. . . .	30	410	9,900	300	7,672	310	7,672	300	7,672	. . . .	. .	Natural.
. . . .	50	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	14	Natural.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several collieries*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
William Kicker, ...	17	Single, . . .	. . . .	August 2, . .	August 5, . .
James Toy, ...	. . .	Married, . .	. . . .	August 15, . .	August 16, . .
William Baldridge, . .	. . .	Married, . .	. . . .	August 23, . .	August 24, . .
Jacob Berg, ...	34	Married, . .	. . . .	August 6, . .	. . . .
Harry Wilson, ...	20	Single, . . .	. . . .	August 24, . .	. . . .

William Kicker was mining coal with his brother; a piece of slate fell, striking him very hard; he died just after being taken out of the mine. Inquest by coroner, verdict, accidental.

William Baldridge was mining coal in a pillar, and was found dead under the slate. Inquest by coroner, verdict accidental, and neglect of posting on part of deceased.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of August, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed by falling slate, ...	At the Birmingham Coal Company's mine.
Hurt seriously by slate, ...	At the Catsbird mine.
Killed by falling slate, ...	At Coal Run Mine.
Foot mashed by falling slate, ...	At Oak Ridge mine.
Bruised by falling slate, ...	At Street's Run mine.

A **STATEMENT** *of the Names, Power, Capacity, and Ventilation of the* *vania, for the Month*

NAME OF COLLIERY. 1	NAME OF OPERATOR. 2	Character of coal—bituminous or semi-bituminous. 3	Slope, shaft, or drift. 4	Pumps—how many. 5	Number of engines. 6	Horse power. 7
Coal Run Mine,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Mine, No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Shaft, No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	. .
Shaft, No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	1	. .
Foster Slope.	Westmoreland Coal Company,	Bituminous,	Slope,	1	1	. .
Larimer Mine,	Westmoreland Coal Company.	Bituminous,	Drift,	. .	. .	. .
Spring Hill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
South Side Mine,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Knob Colliery,	Knob Coal Company,	Bituminous,	Slope,	1	1	30
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	2	. .	. .
Leechburg Colliery,	Leechburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Millwood Shaft,	Millwood Coal Company,	Bituminous,	Shaft,	1	1	. .
Union Mines,	M. Graber & Co.,	Bituminous,	Drift,	. .	3	28
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Sterling Mine,	Brown & Cochran,	Bituminous,	Drift,	. .	. .	. .
Oak Ridge Mine,	Oak Ridge Coal Co., limited,	Bituminous,	Drift,	. .	. .	. .
Mansfield C. and C. Co.,	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	1	1	12
Pitts. & Conn. C. & C. Co.,	Pitts. & Connellsville C. & C. Co.,	Bituminous,	Shaft,	6	4	. .
Lemont Mines,	Ewing, Hanna & Co.	Bituminous,	Slope,	1	1	30
Loyalhanna C. & C. Co.,	Loyalhanna Coal and Coke Co.,	Bituminous,	Shaft,	3	. .	. .
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	. .	. .	. .
Greensburg Mines,	Greensburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Fort Pitt,	Port Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .
Eldorado,	Zuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Mt. Braddock,	Colvin & Torrence,	Bituminous,	Drift,	1	2	. .
Dexter Mines,	J. R. Stauffer & Co.,	Bituminous,	Drift,	. .	. .	. .
Lain Colliery,	Sandy Run Coal Company,	Semi-bitum.	Drift,	. .	. .	. .
Mount Equity,	Kimble Coal and Iron Company,	Semi-bitum.	Drift,	. .	. .	. .
Cumberland Mine,	J. W. Williams,	Semi-bitum.	Drift,	. .	. .	. .
Keystone Mine,	Keystone Coal Company,	Semi-bitum.	Drift,	. .	1	. .
Hampton Mine,	John McIntyre,	Bituminous.	Drift,	. .	1	. .
Loyalhanna Shaft,	Loyalhanna Coal Company,	Bituminous,	Shaft,	2	1	. .
Armstrong's,	Charles H. Armstrong,	Bituminous,	Drift,	. .	. .	. .
Mine, No. 1,	Boyle & Hazlett,	Bituminous,	Slope,	1	1	60
Mine, No. 2,	Boyle & Hazlett,	Bituminous,	Slope,	2	1	60
Oak Hill, No. 3,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Oak Hill, No. 4,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Plum Creek Mines,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Sandy Creek,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Shafton Mine,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Connellsville Gas C. Co.,	Connellsville Gas Coal Company,	Bituminous,	Slope,	3	1	75
National Mines,	Consolidated Coal Mining Co.,	. . . .	Drift,	1	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of September, 1878.

								VENTILATION.										
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	154	26	42	222	15	5	. . . .	9	. . .	. . .	21,700	. . .	20,400	. . .	22,000	. . .	21,000
. .	228	5	37	270	10	. .	. . . .	3	. . .	. . .	33,000	. . .	30,500	. . .	27,500	. . .	29,800
2	186	20	36	242	14	. .	. . . .	3	. . .	. . .	20,000	. .	22,000	. . .	22,100	. . .	21,000
4	190	20	56	266	14	. .	. . . .	3	107¼	420	25,000	400	24,000	400	24,000	428	24,800
2	108	. .	. .	. .	. .	. .	8,642	3									
. .	66	5	. . .	. .	. .	. .	4,552	4									
. .	32	. .	. . .	. . .	. .	. .	2,334	4									
. .	92	. .	. . .		. .	. .	5,830	3									
2	16	8	5	29	1	. .	100	2	60	100	6,000	98	5,880	98	5,880	96	5,760
2	15	. .	20	35	3	1	1,833	2	49								
. .	46	8	4	58	4	. .	3,100	3	48	160	7,680	150	7,200	170	8,160	160	7,680
6	50	5	9	64	6	. .	. . . .	2	51	200	10,200	210	10,710	200	10,700	200	10,200
3	117	20	. . .	157	15	4	5,200	7	42	170	7,350	150	6,552	160	6,888	170	7,350
. .	26	5	5	36	1	1	1,000	2	36								
. .	112	. .	11	123	10	4	13,500										
. .	58	. .	11	69	5	. .	. . . .	3	48	. . .	. . . .	52	2,490	67	3,216	260	12,480
									30	. . .	. . . .	180	5,400	240	7,200	182	5,460
1	90	6	26	122	8	3	3,142	13	48	75	3,600	. . .	. . . .	. . .	. . . .	75	3,600
7	77	2	106	185	5	5	13,012	3	64	125	10,350	110	9,389	175	13,424	120	10,010
2	24	. .	7	31	4	1	4,041	3	42	150	6,525	150	6,552	150	6,552	150	6,552
										140	6,174	140	6,174	140	6,174	140	6,174
										180	7,728	180	7,728	180	7,728	180	7,828
. .	80	10	13	103	10	.	. .	2	48	350	15,360	400	19,200	270	12,960	300	14,400
. .	20	. .	3	23	2	1	2,520										
. .	18	. .	4	22	3	1	1,738	2	48	82	3,936	76	3,648	72	3,456	90	4,320
. .	60	4	12	76	5	1	. . . .	3	42	20	840	25	1,050	25	1,050	30	1,200
. .	13	. .	3	16	2	. .	1,760	2	12	.	. . . .	. . .	. . . .	. . .	. . . .	325	3,948
2	35	1	5	42	5	2	6,240	2	25	280	7,000	285	7,125	284	7,100	286	7,150
									30	250	7,500	255	7,650	254	7,620	256	7,680
. .	12	. .	1	13	1	. .	2,016	3	36	. . .	. . . .	. . .	. . . .	. .	. . . .	49	1,764
. .	45	5	. . .	50	4	1	3,000	2	48	85	4,080	85	4,080	85	4,080	85	4,080
. .	26	4	10	40	5	. .	2,543	2	33	180	6,120	190	6,460	190	6,460	170	5,780
. .	12	4	6	22	1	. .	700	4	96								
. .	75	.	15	90	7	. .	3,600	3	72	100	7,200	100	7,200	116	8,352	116	8,352
. .	120	8	20	148	8	. .	7,560										
4	80	10	13	104	. .	. .	. . .	2	48	320	15,360	400	19,200	270	12,960	300	14,440
. .	66	10	14	90	6	. .	2,677	2									
2	20	2	4	26	3	2	404	2									
2	28	1	7	37	4	2	5,544	2									
. .	55	10	5	70	3	1	4,096	3	42	400	16,800	397	16,674	299	12,558	387	16,255
. .	164	19	10	193	8	1	11,504	4									
. .	117	25	30	172	16	. .	4,662	10	56	. .	. . . .	50	2,812	60	3,375	100	5,625
. .	163	27	68	258	23	5	7,561	21	48	113	5,424	162	7,776	105	5.040	217	10,416
4	34	5	4	43	3	. .	1,975	2	45	240	10,800	260	11,700	210	9,450	290	12,600
2	20	4	4	28	3	3	2,300	2	64								
1	73	6	17	90	12	. .	. . . .	2	36	230	8,280	210	7,560				
									40	64	2,560	185	7,400				

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Coal Run Mine,	....	....	480	22,000	440	20,500	490	22,050	450	21,000
Mine, No. 4,	....	....	....	32,000	....	30,000	....	28,000	....	30,000
Shaft, No. 1,	....	....	420	19,800	410	20,900	415	21,200	430	20,800
Shaft, No. 2,	....	....	360	25,000	520	24,000	535	24,450	580	25,200
Foster Slope,	....	....	....	16,500	....	14,400	....	15,000	....	15,300
Larimer Mine,	....	....	....	....	....	....	....	....	....	....
Spring Hill,	....	....	....	....	....	9,500	....	....	....	6,600
South Side Mine,	....	....	....	11,500	....	....	....	10,900	....	6,400
Knob Colliery,	98	84¾	85	4,420	85	4,420	85	4,420	84	4,368
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Leechburg Colliery,	160	....	130	6,240	135	6,480	120	5,760	130	6,240
Millwood Shaft,	200	10,200	....	210	10,000	....	....	....	....	....
Union Mines,	162½	....	....	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Sterling Mine,	....	....	....	....	....	....	....	....	....	....
Oak Ridge Mine,	....	....	....	....	70	2,800	87	3,480	78	3,120
Mansfield Coal & Coke Co.,	....	....	70	3,360	....	....	70	3,360	....	....
Pitts. and Conn. C. & C. Co.	132½	....	90	8,147	95	8,458	100	8,760	100	8,760
Lemont Mines,	....	....	90	2,424	90	2,424	90	2,424	90	2,424
Loyalhanna C. and C. Co.,	....	....	....	....	....	....	....	....	....	....
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Greensburg Mines,	80	....	....	....	....	....	....	....	....	....
Fort Pitt,	....	....	....	....	....	....	....	....	....	....
Eldorado,	....	....	....	....	....	....	....	....	....	....
Mt. Braddock,	284	....	165	6,950	170	7,160	162	6,804	171	7,182
	254	....	177	7,450	191	7,618	174	7,308	183	7,668
Dexter Mines,	....	....	....	....	....	....	....	....	40	1,980
Lain Colliery,	85	4,080	250	4,000	250	4,000	250	4,000	250	4,000
Mount Eqnity,	182½	....	100	3,250	110	3,575	110	3,575	100	3,250
Cumberland Mine,	....	....	....	....	....	....	....	....	....	....
Keystone Mine,	108	....	100	7,200	100	7,200	100	7,200	100	7,200
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Shaft,	....	....	....	....	....	....	....	....	....	....
Armstrong's,	....	....	....	....	....	....	....	....	....	....
Mine, No. 1,	....	....	....	....	....	....	....	....	....	....
Mine, No. 2,	....	....	....	....	....	....	....	....	....	....
Oak Hill, No. 3,	....	....	....	....	....	....	....	....	....	....
Oak Hill, No. 4,	....	....	....	....	....	....	....	....	....	....
Plum Creek Mines,	....	....	....	....	40	1,920	30	1,440	20	960
Sandy Creek,	149	....	30	1,440	30	1,440	45	2,160	53	2,544
Shafton Mine,	249	....	170	7,650	160	7,200	155	6,775	190	8,550
Connellsville Gas Coal Co.,	....	....	....	....	....	....	....	....	....	....
National Mines,	....	....	87	3,480	210	8,400	....	....	....	....

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	HOW VENTILATED.
21	22	23	24	25	26	27	28	29	30	31		
....	34	640	21,760	600	20,400	645	21,940	620	21,080	....	..	By furnace.
....	49	520	33,200	420	30,500	480	28,000	440	29,700	....	..	By furnace.
....	51	400	20,400	420	21,420	415	21,165	415	21,165	....	..	By fan 12 feet diameter.
....	40	625	25,000	600	21,000	600	24,000	625	25,000	....	..	By fan 12 feet diameter.
....	...	...	....	...	....	...	....	...	....	....	..	By fan 6 feet diameter.
....	...	...	15,900	...	16,100	...	15,750	...	17,950	....	..	By furnace.
....	...	...	....	...	....	...	....	...	....	....	..	By furnace.
....	...	...	....	...	22,400	...	....	...	19,500	....	..	By furnace.
....	30	200	6,000	196	5,880	196	5,880	192	5,760	5,880	6	By steam exhaust.
....	25	...	....	...	....	...	....	...	....	....	.	Natural ventilation.
6,180	40	170	6,800	180	7,200	165	6,600	160	6,400	6,750	5	Natural ventilation.
....	49	70	9,100	70	9,100	...	....	...	....	....		By fan 12 feet diameter.
....	42	160	1,930	130	5,796	140	6,132	160	6,930	6,447	3	Natural ventilation.
....	...	...	....	...	....	...	....	...	....	....	2	By furnace.
....	...	...	....	...	....	...	....	...	....	....	15	Natural ventilation.
....	40	...	....	400	16,000	510	20,400	515	20,600	....	3	By furnace 6 by 25 feet.
....	48	75	3,600	...	....	...	....	...	....	....	3	Natural ventilation.
96	...	90	8,147	95	8,458	100	8,760	100	8,760	96	6	By steam exhaust.
....	48	370	17,856	370	17,856	370	17,856	370	17,856	17,856	3	By steam exhaust.
....	...	...	....	...	....	...	....	...	....	....		By steam exhaust.
....	...	...	....	...	....	...	....	...	....	....	2	Natural ventilation.
....	25	120	3,000	110	2,750	110	2,750	125	3,125	2,906	1	Natural ventilation.
....	24	100	2,400	...	....	..	....	...	....	....	..	Natural ventilation.
....	49	...	....	...	....	...	....	80	4,259	....	..	Natural ventilation.
167 178	30	480	14,440	490	14,700	488	14,640	492	14,760	....	..	By steam exhaust.
....	...	...	....	...	....	...	....	...	....	....	2	Natural ventilation.
....	16	380	6,080	380	6,080	380	6,080	380	6,080	6,080	3	By furnace 4 by 4 feet.
....	25	290	7,177	310	7,672	310	7,672	280	6,930	7,312	..	Natural ventilation.
....	...	...	....	...	....	...	....	...	....	....	..	Natural ventilation.
....	72	100	7,200	100	7,200	116	8,352	116	8,352	....	2	Natural ventilation.
....	...	...	....	...	....	...	....	...	....	....	..	Natural ventilation.
....	...	...	....	...	....	...	....	...	....	....	..	By steam exhaust.
....	...	...	....	...	....	...	....	...	....	....	4	By furnace 6 by 12 feet.
....	...	...	....	...	....	...	....	...	....	....	2	By steam exhaust.
....	...	...	....	...	....	...	....	...	....	....	4	By furnace.
....	45	378	17,010	366	16,470	386	17,370	369	16,605	....	4	By furnace.
..	...	...	....	...	....	...	....	...	....	....	..	Natural ventilation.
....	56	...	....	40	2,250	70	3,938	50	2,812	....	10	Natural ventilation,
....	48	40	1,920	42	2,010	80	3,840	60	2,880	2,664	..	Natural ventilation.
169	98	120	11,760	130	12,740	105	10,290	150	13,720	....	4	By steam exhaust.
....	64	...	....	...	....	...	....	...	....	....	..	By steam exhaust.
....	24	330	7,920	610	14,640	...	....	...	....	....	.	By steam exhaust.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
James Stiner,	28	Single,	. . . .	September 16,	September 17,
James Welsh,	16	Single,	. . . .	September 18,	September 19,
L. Knight,	35	Married,	. . . .	September 19,	September 25,
William Knight,	14	Single,	. . . .	September 19,	September 25,
David Kennedy,	14	Single,	. . . .	September 28,	September 30,
James Foy,	. . .	. . . .	. . . .	. . . .	. . . .
L. Monahan,	60	Married,	. . . .	August,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of September, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed by falling slate, ...	At the Penn Gas Coal Company's shaft, No. 2. Inquest was held by coroner. Verdict of jury was, that he came to his death by fall of slate, while working in No. 2 shaft, mining coal ; that the injuries he received, which caused his death, was the result of his own neglect, or carelesness, and not otherwise.
Killed by fall of slate, ...	At the Chess Pit, Gray & Bell, operators. Deceased was a water hauler, and went in John Shorts place to help to load a wagon of coal, when the slate fell, killing him instantly. The coroner's jury returned a verdict of accidental death.
Killed by fall of slate, ...	At the Pittsburg and Connellsville Gas Coal and Coke Company's mine. These two, father and son, were mining coal in a room ; had neglected to stand up the necessary timber to support the roof. The coronor's jury returned a verdict of accidental death.
Killed by fall of slate, ...	
Killed by fall of coal, ...	At the New York and Cleveland Gas Coal Company's mine, No. 4. Deceased was working with Cyrus Wilkinson ; had just commenced to load the wagon, when, without the least warning, the coal fell, killing him instantly. Inquest was held September 29, when a verdict of accidental death was rendered.
Hurt by fall of slate, ...	At the mine of Louis Staib. Has since died—August 19.
Broken arm, ...	At Boyle & Hazlett's mine.

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A STATEMENT *of the Names, Power, Capacity, and Ventilation of the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Cumberland,	J. W. Williams,	Semi-bitum,	Drift,	. .	. .	. .
Union Mine,	M. Graver & Co., limited,	Bituminous,	Drift,	. .	3	28
Eldorado Mine,	Zuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Fort Pitt,	Fort Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .
Dexter Mine,	J. R. Stauffer & Co.,	Bituminous,	Drift,	. .	. .	. .
Sterling Mine,	Brown & Cochran,	Bituminous,	Drift,	. .	. .	. .
Loyalhanna Mine,	Loyalhanna Coal Company,	Bituminous,	Shaft & slope,	. .	. .	. .
Larimer's,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Southside Mine,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Springhill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
Nixon Mines,	Chartier's Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	2	. .	. .
Lain Colliery,	Sandy Run Coal Company,	Semi-bitum.	Drift,	. .	. .	. .
No. 1,	Boyle & Hazlett,	Bituminous,	Slope,	1	2	60
No. 2,	Boyle & Hazlett,	Bituminous,	Slope,	2	2	60
Millwood Shaft,	Millwood Coal and Coke Co.,	Bituminous,	Shaft & slope,	1	1	. .
Ocean Mine,	W. L. Scott,	Bituminous.	Drift,	. .	1	. .
Knob Colliery,	Knob Coal Company,	Bituminous,	Shaft & slope,	1	1	30
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	. .	. .	. .
Deer Park,	Mahoning Coke Company,	Bituminous,	Slope,	2	2	36
Keystone,	Keystone Coal Company,	Semi-bitum.	Drift,	1	1	.
Plank Road Mine,	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .
Fair Haven,	Pitts. & Castle Shannon Coal Co.,	Bituminous,	Drift,	. .	. .	. .
No. 3,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
No. 4,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Plum Creek,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Sandy Creek,	N. York and Cleveland G. C. Co.,	Bituminous,	Drift,	. .	. .	. .
Enterprise,	O'Neil & Co.,	Bituminous,	Drift,	. .	. .	. .
Leechburg Colliery,	Leechburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Lemont Mines,	Ewing Hanna & Co.,	Bituminous,	Slope,	1	1	30
Oakridge,	Oakridge Coal Company, limited,	Bituminous,	Drift,	. .	. .	. .
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Shaft No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	2	. .
Shaft No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	1	2	. .
Mine No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	.
Connellsville G. C. Co.,	Connellsville Gas Coal C4mpany,	Bituminous,	Slope,	3	1	75
Chartiers Gas Coal Co.,	Chartiers Gas Coal Company,	Bituminous,	Slope,	1	2	26
Shafton Mines,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Hampton Mines,	John McIntyre,	Bituminous,	Drift,	. .	1	. .
P. & C. G. C. & C. Co.	P. & C. Gas Coal and Coke Co.,	Bituminous,	Shaft & drift,	6	4	. .
Armstrong's,	C. H. Armstrong & Son,	Bituminous,	Drift,	. .	. .	. .
Saxman,	M. Saxman, jr., & Co.,	Bituminous,	Drift,	. .	1	. .
Cornell & Werling,	W. H. Brown's Heirs,	Bituminous,	Drift,	2	5	. .
Lindsay & McCausland,	Lindsay & McCausland,	Bituminous,	Drift,	1	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of October, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	20	2	4	26	2	. .	2,000	4									
3	80	15	33	118	15	4	6,121	9	42	180	7,770	170	7,392	160	6,888	120	5,418
. .	15	. .	3	18	2	. .	2,387	2	12	. . .	. . . .	. . .	. . . .	. . .	. . . .	300	3,648
. .	70	6	1	77	4	1	. . . .	3	48	100	4,800	. . .	. . . .	110	4,280	300	14,400
. .	12	. .	1	13	1	. .	2,229	2	42	119	4,998						
. .	136	. .	20	156	19	7	18,500										
. .	80	10	13	103	10	. .	. . .	2	48	300	14,400	350	16,800	370	17,760	300	14,400
. .	77	. .	. . .	. . .	. .	. .	5,886	3									
. .	90	. .	. . .	. . .	. .	. .	2,575	3									
. .	32	. .	. . .	. . .	. .	. .	2,638	4									
. .	108	. .	. . .	. . .	. .	. .	9,237	3	. . .	. . .	16,800	.	15,900	. . .	16,000	. . .	17,400
. .	30	2	3	35	2	. .	1,600	2									
2	15	. .	2	30	3	1	3,154	2	49								
. .	48	5	. . .	53	5	. .	2,500	2	48	125	6,000	125	6,000				
2	21	7	. . .	28	3	2	1,312	2									
2	28	9	. . .	38	4	2	1,600	2									
6	50	5	9	61	6	. .	. . .	2	51	220	11,000						
. .	52	7	2	61	4	. .	3,000	2	56	130	7,280	. . .	. . . .	. . .	. . . .	130	7,280
2	22	8	6	36	2	. .	800	2	60	104	6,240	102	6,120	102	6,120	106	6,360
. .	20	. .	3	23	2	1	4,000										
2	19	1	2	22	3	2	. . .	2	56	230	12,880	240	13,440	240	13,440	260	14,550
									54	240	12,960	250	13,500	250	13,500	270	14,580
. .	75	. .	15	90	8	. .	5,500	3	72	280	20,060	278	20,016	280	20,160	280	20,160
. .	23	. .	2	25	2	. .	485	2	42	. . .	2,300						
. .	80	8	4	92	7	1	6,000	7	63	150	9,450	155	9,765	150	9,450	152	9,576
. .	55	10	21	86	4	1	4,785	2	42	346	14,532	335	14,070	304	12,810	348	14,616
. .	164	19	31	214	9	1	12,691	5	. . .	914	33,777	969	32,871	885	33,804	839	31,295
. .	117	25	30	172	17	. .	6,587	15	52½	70	3,997	80	4,500	30	1,588	110	6,187
. .	156	24	56	238	23	5	9,415	21	48	137	6,576	187	8,976	150	7,200	128	6,144
. .	110	10	25	145	18	1	6,575										
. .	58	10	11	72	4	. .	4,000	4	48	189	9,100	154	6,440	145	6,960	148	7,004
2	23	2	4	29	4	1	3,984	3	42	150	6,552	150	6,542	150	6,542	150	6,542
										140	6,174	140	6,174	140	6,174	140	6,174
										190	8,148	190	8,148	190	8,148	190	8,148
. .	55	. .	11	66	5	. .	. . . .	3	48	120	4,800	67	3,216	57	2,736	67	3,216
									30	280	8,400	303	10,908	283	10,188	252	9,072
. .	154	26	42	222	15	5	. . . .	9	. . .	. . .	22,100	. . .	20,400	. . .	21,420	. .	23,460
4	186	20	36	242	14	. .	. . . .	3	99⅓	. . .	19,635	. . .	23,460	. . .	21,420	. . .	20,400
.	200	22	55	277	13	3	. . . .	2	101⅓	420	25,000	400	24,000	400	24,000	428	24,800
. .	228	5	10	243	. .	. .	. . . .	3	. . .	. . .	25,840	. . .	27,900	. . .	27,200	. . .	27,300
2	30	3	3	36	3	3	3,900	3	64	. . .	. . . .	. . .	. . . .	. . .	. . . .	80	7,526
1	44	3	7	54	3	. .	1,500										
4	31	5	4	40	2	. .	1,883	2	45	260	11,700	250	9,900	250	11,250	280	12,600
. .	130	10	19	159	8	. .	7,568										
7	79	. .	106	185	. .	. .	14,281	4	64	135	10,941	145	11,562	150	11,872	135	10,941
. .	81	10	14	105	5	2	3,640										
. .	25	1	8	34	3	. .	2,100										
4	140	12	30	182	8	1	3,205	4	48								
. .	14	1	2	17	. .	1	700	3	40	300	12,000						

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Cumberland,	....	....	....	....	....	....	....	....	....	....
Union Mine,	....	....	....	....	....	....	....	....	....	....
Eldorado Mine,	....	....	....	....	....	....	....	....	....	....
Fort Pitt,	....	....	....	....	....	....	....	....	....	....
Dexter Mine,	....	....	....	....	....	....	....	....	....	....
Sterling Mine,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Mine,*	*	....	....	....	....	....	....	....	....	....
Larimer's,	....	....	....	....	....	....	....	....	....	....
Southside Mine,	....	....	....	10,500	....	8,400	....	10,500	....	....
Springhill,	....	....	....	4,800	....	....	....	5,200	....	....
Foster Slope,	....	....	....	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Lain Colliery,	....	....	185	2,940	185	2,940	....	....	....	....
No. 1,	....	....	....	....	....	....	....	....	....	....
No. 2,	....	....	....	....	....	....	....	....	....	....
Millwood Shaft,	....	....	200	9,100	....	....	200	9,100	....	....
Ocean Mine,	....	....	....	....	....	....	....	....	184	6,072
Knob Colliery,	103½	....	90	4,680	88	4,576	88	4,576	96	4,732
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Deer Park,	13,580	....	210	11,760	210	11,760	210	11,760	210	11,760
	13,635	....	220	10,780	220	10,780	220	10,780	220	10,780
Keystone,	279½	....	160	11,520	156	11,232	160	11,520	170	12,240
Plank Road Mine,	....	....	....	....	....	....	....	....	....	....
Fair Haven,	151	....	145	6,090	140	5,880	145	6,090	142	5,964
No. 3,	....	....	....	....	....	....	....	....	....	....
No. 4,	....	....	....	....	....	....	....	....	....	....
Plum Creek,	....	....	20	960	30	1,440	50	2,400	40	1,920
Sandy Creek,	150	....	90	4,320	47	2,256	80	3,840	90	4,320
Enterprise,	....	....	....	....	....	....	....	....	....	....
Leechburg Colliery,	....	....	169	8,116	130	6,240	135	6,480	140	6,720
Lemont Mines,	....	....	90	2,424	90	2,424	90	2,424	90	2,424
Oakridge,	357¼	....	87	3,480	109	4,360	91	3,640	94	3,760
Coal Run,	....	....	485	22,000	470	20,200	475	21,500	500	23,500
Shaft No. 1,	....	....	500	20,100	490	23,500	430	20,900	385	20,500
Shaft No. 2,	....	....	560	25,000	520	24,000	535	24,450	580	25,200
Mine No. 4,	....	....	520	25,700	580	27,700	560	27,400	....	....
Connellsville Gas Coal Co.,	....	....	....	....	....	....	....	....	....	....
Charticrs Gas Coal Co.,	....	....	....	....	....	....	....	....	....	....
Shafton Mines,	2,152	....	170	7,650	150	6,750	165	7,425	180	8,100
Hampton Mine,	....	....	....	....	....	....	....	....	....	....
Pitts. & Conn. G. C. & C. Co.	141¼	....	120	10,010	130	10,630	140	11,251	130	10,630
Armstrong's,	....	....	....	....	....	....	....	....	....	....
Saxman,	....	....	....	....	....	....	....	....	....	....
Cornell & Werling,	....	....	....	....	....	....	....	....	....	....
Lindsay & McCausland,	....	....	....	....	....	....	....	....	....	....

* Cannot measure on account of leakage.

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	HOW VENTILATED.
21	22	23	24	25	26	27	28	29	30	31	32	
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Natural vent.
. . . .	42	170	7,392	150	6,552	140	6,132	110	4,578	6,138	6	Natural vent.
. . . .	49	. . .	. . . .	. . .	. . . .	. . .	. . . .	74	4,465	. . .	2	Natural vent.
. . . .	30	130	3,900	140	4,200	150	4,500	190	5,700	. . . .	3	Natural vent.
. . . .	24	76	1,821	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Natural vent.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	15	Natural vent.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Steam exhaust.
. . . .	. . .	. . .	17,500	. . .	17,800	. . .	19,200	. . .	19,500	. . . .	. .	Furnace.
. . . .	. . .	. . .	. . . .	. . .	14,450	. . .	18,900	. . .	19,500	. . . .	. .	Furnace vent.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Furnace vent.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	.	Fan.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Small furnace.
. . . .	16	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Natural vent.
. . . .	16	425	6,800	425	6,800	. . .	. . . .	. . .	. . . .	. . . .	3	Small furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	6	Small furnace.
. . . .	96	60	9,000	. .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Fan 12 feet diameter.
. . . .	24	. . .	. . . .	. . .	. . . .	. . .	. . . .	315	7,560	. . . .	. .	Furnace.
89¼	30	220	6,300	206	6,180	206	6,180	214	6,420	6,270	6	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Natural vent.
. . . .	56	510	28,560	520	29,120	520	29,120	540	30,240	. . . .	3	Steam exhaust.
. . . .	72	200	14,400	198	14,256	200	14,400	200	14,400	14,364	2	Natural vent.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	2	Small furnace.
. . . .	56	155	8,680	160	8,960	155	8,680	157	8,792	156	. .	Natural vent.
. . . .	45	303	18,635	300	14,490	187	8,415	326	14,670	. . . .	. .	Furnace.
. . . .	. .	941	23,505	643	23,819	648	23,972	636	23,042	. . . .	. .	Natural vent.
. . . .	52½	80	1,600	50	2,812	30	1,088	100	5,625	. . . .	15	Natural vent.
. . . .	. . .	30	1,440	47	2,256	75	3,600	52	2,496	2,448	18	Natural vent.
. . . .	48	170	8,160	125	6,000	130	6,240	140	6,720	141	. .	Natural vent.
2,424	48	372	17,904	.372	17,904	372	17,904	372	17,904	. . . .	3	Steam exhaust.
95¼	40	420	16,800	460	18,400	452	18,080	462	18,480	17,940	3	Furnace.
. . . .	34	650	22,100	600	20,400	630	21,420	690	23,460	. . . .	. .	Furnace.
. . . .	51	385	19,635	460	23,460	420	21,420	400	20,400	. . . .	30	Fan 12 feet in diameter.
. . . .	40	625	25,000	600	24,000	600	24,000	625	25,000	. . . .	. .	Fan 12 feet in diameter.
. . . .	. . .	380	25,810	450	27,900	425	27,200	400	27,200	. . . .	24	Furnace
. . . .	64	. . .	. . . .	. . .	. . . .	. . .	. . . .	85	7,837	. . . .	. .	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Furnace.
166	98	145	12,250	110	10,780	125	12,250	130	12,740	. . . .	4	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural vent.
. . . .	64	120	10,010	130	10,630	140	11,251	130	10,630	130	6	Steam exhaust.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. .	Natural vent.
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	12	Furnace.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	3	Natural vent.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Robert Crouse,	60	Married,	. . . .	October 18,	. . . .
Frederick Jatke,	30	Married,	. . . .	October 22,	. . . .
William Bradstock,	. . .	Married,	. . .	October 30,	. . . .
J. Stirtmaley,	29	Married,	. . . .	October 8,	. . . .
Daniel McGloughlan,	35	Married,	. . . .	October 26,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held &c., in said district, for the month of October, 1878 :

NATURE OF ACCIDENT.	REMARKS.
Arm hurt by fall of slate, ...	At the Fort Pitt mines.
Hurt slightly by wagons, ...	At the Fort Pitt mines.
Hurt seriously, by fall of slate, . . .	At Ocean mines.
Arm broken by wagons, ...	At Boyle and Hazlett's mine.
Broken leg, by fall of slate, ...	At Chartiers Gas Coal Company mine.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal - bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Carondolet,	Frazer & Frye,	Bituminous,	Drift,	. .	. .	.
Oak Ridge Mine,	Oak Ridge Coal Co., (limited,)	Bituminous,	Drift,	. .	. .	. .
Cumberland Mines,	J. W. Williams,	Semi-bitum.	Drift,	. .	. .	.
No. 1 Slope,	Boyle & Hazlett,	Bituminous,	Slope,	2	1	60
No. 2 Slope,	Boyle & Hazlett,	Bituminous,	Slope,	2	1	60
Dexter Mine,	Hope Coal Company, (limited,)	Bituminous,	Drift,	.	. .	. .
Street's Run,	I. D. Risher,	Bituminous,	Drift,	. .	. .	. .
Loyalhanna Shaft,	Loyalhanna Coal and Coke Co.,	Bituminous,	Slope & shaft,	. .	. .	. .
Greensburg Mines,	Greensburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Enterprise,	O'Neil & Co.,	Bituminous,	Drift,	.	. .	. .
Iron City,	Phillips & Mettenzsway,	Bituminous,	Drift,	2	. .	. .
Cumberland and Elk Lick Coal Company,	Cumberland and Elk Lick Coal Company.	Semi-bitum.	Drift,	. .	. .	. .
Mount Braddock,	Colvin & Torrence,	Bituminous,	Slope,	1	1	. .
Hampton Mines,	John McIntyre,	Bituminous,	Drift,	. .	1	. .
Keystone Mine, No. 1,	W. H. Brown's heirs,	Bituminous,	Drift,	1	1	1
Keystone Mine, No. 2,	W. H. Brown's heirs,	Bituminous,	Drift,	. .	. .	. .
Cornell & Werling,	W. H. Brown's heirs,	Bituminous.	Drift,	2	5	. .
Rising Sun Mines,	Markle & Co.,	Bituminous,	Drift,	. .	. .	. .
Thompson Coal Road,	G. W. Jolliff,	Bituminous,	Drift,	. .	. .	. .
Shafton Mine,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Mount Equity,	Kimble Coal and Iron Company,	Semi-bitum.	Drift,	. .	. .	. .
Union Works.	M. Graver & Co., (limited,)	Bituminous,	Drift,	. .	3	35
Mansfield Coal and Coke Company,	Mansfield Coal and Coke Company	Bituminous,	Drift,	1	1	12
Lain Colliery,	Sandy Run Coal Company,	Semi-bitum,	Drift,	. .	. .	. .
Dexter Coke Works,	J. R. Stauffer & Co.,	Bituminous.	Drift,	. .		. .
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .		. .
Fair Haven,	Pitts. and Castle Shannon C. Co.,	Bituminous,	Drift,	. .	. .	. .
Connellsville Gas Coal Company,	Connellsville Gas Coal Company,	Bituminous,	Slope,	3	1	75
Waverly Mines,	J. B. Corey,	Bituminous,	Drift,	. .	. .	. .
Corey Mine,	J. B. Corey & Co.,	Bituminous,	Drift,	. .	. .	. .
	Horner & Roberts,	Bituminous,	Drift,	2	. .	.
Uniondale,	Reid Brothers,	Bituminous,	Slope,	2	2	20
Shaft No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	. .	. .	. .
Shaft No. 2,	Penn Gas Coal Company,	Bituminous,	Shaft,	. .	. .	. .
Coal Run,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
South Side,	Westmoreland Coal Company,	Bituminous,	Drift,	. .		. .
Larimer,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope.	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
Spring Hill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Sandy Creek,	N. Y. and Cleveland Gas Coal Co.,	Bituminous,	Drift,	. .	. .	. .
No. 4,	N. Y. and Cleveland Gas Coal Co.,	Bituminous,	Drift,	. .	. .	. .
Plum Creek,	N. Y. and Cleveland Gas Coal Co.,	Bituminous,	Drift,	. .	. .	.
Six-Mile Ferry, No. 1,	H. B. Hays & Bro.,	Bituminous,	Drift,		1	10
Six-Mile Ferry, No. 2,	H. B. Hays & Bro..	Bituminous,	Drift,	2	1	10
Beck's Run Mine,	H. B. Hays & Bro.,	Bituminous,	Drift,	. .	1	10
Jefferson Mine,	Foster, Clark & Wood,	Bituminous,	Drift,	1	. .	.
Knob Colliery,	Knob Coal Company,	Bituminous,	Shaft & slope,	1	1	30
Leechburg Colliery Company,	Leechburg Colliery Company,	Bituminous,	Drift,	. .	. .	. .
Sterling Mines,	Brown & Cochran,	Bituminous,	Drift,	.	. .	. .
Deer Park,	Mahoning Coke Co., (limited,)	Bituminous,	Slope,	2	2	36
Amity Mine,	J. C. Risher,	Bituminous,	Drift,	. .	. .	. .
Millwood Shaft,	Millwood Coal and Coke Company	Bituminous,	Shaft,	1	1	. .
Youghiogheny Mines,	James O'Neil,	Bituminous,	Drift	1	1	. .
Nimick's Mine,	Thomas Fox,	Bituminous,	Drift,	. .	. .	
Hersh Mine,	J. J. Hobslitzell,	Semi-bitum.	Slope,	. .	1	30
Fort Pitt Mines,	Fort Pitt Coal Company,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the First Bituminous Mine District of Pennsyl-
of November, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	40	. .	6	46	3	. .	1,509										
. .	60	1	11	72	6	. .	. . . . .	3	48	96	4,608	87	4,116	66	3,168		
									30	253	9,108	210	6,300	204	6,120	185	5,460
. .	15	2	6	23	2	. .	900	3	96								
2	21	. .	7	28	3	2	3,300										
2	28	1	9	38	4	2	4,160										
. .	16	.	3	19	2	.	1,600										
. .	100	6	11	117	6	2	3,400										
. .	80	10	13	103	10	. .	. . . .	2	48	360	17,280	370	17,760	370	17,760	350	16,800
. .	11	. .	2	13	2	1	756	2	48	70	3,360	86	4,128	. . .	. . . .	110	5,280
. .	120	10	27	151	18	1	5,840										
2	56	8	12	76	4	4	2,800	2	42	. . .	18,000						
. .	54	7	8	69	4		4,800	3	105	100	10,500	100	10,500	120	12,600	100	10,500
2	33	1	6	40	6	2	6,210	2	30	250	7,500	255	7,650	254	7,620	256	7,680
1	150	10	19	179	8	. .	6,120	6									
1	115	30	37	182	9	. .	7,575										
. .	85	22	26	133	12	. .	4,022										
4	170	20	30	220	8	1	7,050	4	50								
. .	20	. .	3	23	2	1	4,000										
. .	40	. .	6	46	2	1	6,000	2	56	660	660	660					
4	31	4	4	39	3	. .	1,550	2	45	260	11,700	240	10,800	280	12,600	250	11,250
. .	28	4	7	39	5	.	2,803	2	20	240	5,928	230	5,681	250	6,170	240	5,928
3	100	10	30	140	15	4	6,140	5	42	160	6,888	140	6,132	150	6,552	180	7,770
1	100	5	30	135	10	2	4,310	13	48	90	4,320						
. .	55	7	. . .	62	5	2	2,500	2	48	120	5,116	120	5,160	120	5,160		
. .	12	. .	1	13	1	. .	2,254	2	42	49	2,058	. . .	. . . . .	. . .	. . . . .	500	21,000
. .	35	3	6	44	2	. .	2,400	2	42								
. .	90	10	6	106	7	1	8,000	7	63	155	9,765	150	9,450	152	9,576	155	9,765
2	33	4	3	40	3	3	5,200	3	64	. . .	. . . . .	. . .	. . . . .	. . .	. . . . .	100	8,768
. .	18	. .	. . .	. . .	2	. .	800	2	61								
. .	40	4	1	45	6	.	. . . .	6									
1	160	. .	40	200	12	1	8,902	3									
3	18	. .	10	28	4	1	2,500	2	49	. . .	13,000						
. .	186	20	36	212	14	. .	. . . .	3	. .	. . .	18,800	. . .	19,300	. . .	21,000	. . .	20,800
. .	200	22	55	277	13	3	. . . .	3	106¼	. .	25,000	. . .	25,000	. . .	25,000	. . .	25,000
. .	154	26	42	222	15	5	. . .	9	. . .	. . .	20,400	. . .	19,500	. .	18,300	. . .	19,300
. .	228	5	31	270	10	. .	. . . .	5	. . .	. . .	24,700	. . .	25,700	. . .	24,375	. .	26,000
. .	85	. .	. . .	. . .		. .	6,661										
. .	70	. .	. . .	. . .	. .	. .	5,971										
. .	. . .	. .	. . .	108	. .	. .	9,950										
. .	. . .	. .	. .	33	. .	.	2,429										
. .	146	46	59	251	24	5	8,495	21	48	195	9,456	175	8,400	295	14,160	270	12,960
. .	183	15	40	248	9	1	9,179										
. .	117	25	30	172	16	. .	4,512	15	56	80	4,500	Not	run.	100	5,625		
1	106		35	141	. .	. .	3,641										
2	172	. .	38	210	17	2	7,045	10	52								
2	106	. .	18	124	7	. .	3,489										
1	70	. .	10	80	6	1	2,600	2	40	250	10,000						
2	22	8	6	36	2	. .	2,000	2	60	105	6,300	105	6,300	108	6,480	110	6,600
. .	70	10	4	84	6	.	5,200	4	48	180	8,640	190	9,120	180	8,640	160	7,680
.	128	30	. .	158	19	7	20,000	4									
2	28		4	32	4	2	5,000	2	56	300	16,800	320	17,720	340	19,040	350	19,600
. .	174	14	24	212	12	3	7,437	2	56								
6	58	5	9	72	7	. .	. . . .	2	51	250	12,500						
1	115	. .	8	223	7	. .	3,800	4									
. .	21	. .	1	22	1	. .	1,200	2	42	. . .	2,200						
1	35	. .	10	45	3	1	2,500	2									
. .	75	6	12	93	5	2	3,000	4	48	200	9,600	. . .	. . . .	150	7,200	175	8,400

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
National Mines,	Consolidated Coal Company,	Bituminous,	Drift,	1	. .	. .
Eldorado Mine,	Zuck & Henry,	Bituminous,	Drift,	.	. .	. .
Buckeye Mine,	John M. Cochran,	Bituminous,	Drift,	2	. .	. .
Lemont Mines,	Ewing, Hanna & Co.,	Bituminous,	Slope,	1	1	30
Ocean Mine,	W. L. Scott,	Bituminous,	Drift,	. .	1	. .
Duquesne Mine,	Duquesne Coal Company,	Bituminous,	Drift,	. .	. .	. .
Latrobe Mines,	N. Saxman & Co.,	Bituminous,	Drift,	. .	1	. .
Chartiers Gas Coal Mines,	James Clark,	Bituminous,	Slope,	1	2	26
Enterprise Mine,	Hartley & Marshall,	Bituminous,	Drift,	1	2	60

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	70	6	18	94	12	. .	. . . . .	3	40	158	6,320	165	6,600	183	7,320	188	7,520
. .	12	. .	3	15	2	1	2,405	2	12	. . .	. . . . .	. .	. . . .	. . .	. . .	600	7,200
2	15	. .	20	35	3	1	3,236	2	49								
2	27	2	5	34	4	1	4,000	2	42	180	7,770	180	7,770	180	7,770	180	7,770
2	60	7	6	73	5	. .	4,000	2	48	.	. . . .	174	8,352	. . .	. . . . .	175	7,350
. .	97	15	9	121	6	. .	. . . . .	6	229	122	23,424	147	42,924	128	37,376	141	44,172
1	31	2	10	43	4	. .	3,417	2									
1	40	2	12	54	3	. .	1,500										
2	85	6	15	106	6	. .	6,505	3	45	275	12,375	300	13,500	260	11,700	280	12,600

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading	Number of cubic feet per minute passing at or near face of head'g
1	11	12	13	14	15	16	17	18	19	20
Carondolet,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Oak Ridge Mine,	. . . .	. . . .	204	8,160	40	2,400	57	2,280	76	3,040
Cumberland Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
No. 1 Slope,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
No. 2 Slope,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Dexter Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Street's Run,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Loyalhanna Shaft,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Greensburg Mines,	88	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Enterprise,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Iron City,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Cumberland and Elk Lick Coal Company,	105	. . . .	120	7,680	120	7,680	150	9,600	120	7,680
Mount Braddock,	254	. . . .	177	7,450	181	7,618	174	7,308	183	7,686
Hampton Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Keystone Mine, No. 1,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Keystone Mine, No. 2,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Cornell & Werling,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Rising Sun Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Thompson Coal Road,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Shafton Mine,	257½	. . . .	160	7,200	150	6,750	170	7,650	140	6,300
Mount Equity,	240	. . . .	130	2,600	110	2,200	130	2,600	. . . .	. . . .
Union Works,	6,835½	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Mansfield Coal and Coke Company,	. . . .	. . . .	78	3,744	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Lain Colliery,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Dexter Coke Works,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Nixon Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Fair Haven,	153	. . . .	148	6,216	145	6,090	147	6,174	145	6,090
Connellsville Gas Coal Company,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Waverly Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Corey Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Horner & Roberts,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Uniondale,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Shaft No. 1,	. . . .	. . . .	425	18,550	430	19,425	480	21,300	450	20,370
Shaft No. 2,	. . . .	. . . .	530	25,400	500	25,000	520	27,750	510	25,000
Coal Run,	. . . .	. . . .	460	20,170	425	18,900	445	18,500	440	19,400
No. 4,	. . . .	. . . .	515	24,550	570	25,725	525	24,100	580	25,800
South Side,	. . . .	. . . .	. . . .	14,175	. . . .	14,125	. .	13,000	. . . .	13,275
Larimer,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Foster Slope,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Spring Hill,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Sandy Creek,	234	125	90	4,320	80	3,840	60	2,880	52	2,496
No. 4,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Plum Creek,	. . . .	. . . .	30	1,440	. . . .	. . . .	50	2,400	. . . .	. . . .
Six-Mile Ferry, No. 1,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Six-Mile Ferry, No. 2,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Beck's Run Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Jefferson Mine,	. . . .	. . . .	240	9,300	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Knob Colliery,	6,420	. . . .	75	3,900	75	3,900	77	4,004	78	4,056
Leechburg Colliery Company,	177	. . . .	130	6,240	120	5,760	140	6,720	140	6,720
Sterling Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Deer Park,	18,340	. . . .	200	11,200	220	12,320	220	12,320	220	12,320
Amity Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Millwood Shaft,	. . . .	. . . .	240	12,000	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Yonghiogheny Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Nimick's Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Hersh Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Fort Pitt Mines,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
National Mines,	. . . .	. . . .	183	7,320	190	7,600	198	7,920	158	6,320
Eldorado Mine,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												HOW VENTILATED.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	
21	22	23	24	25	26	27	28	29	30	31		
...	.	...	...	...	...	...	...	.	...	...	..	Natural ventilation.
94½	40	450	18,000	416	16,640	402	16,080	500	20,000	17,680	3	Furnace 6x25 feet.
...	96	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	4	Steam exhaust.
...	...	...	...	...	...	...	...	...	...	...	8	Small furnace.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	3	Furnace.
...	...	...	...	...	...	...	...	...	...	...	..	Steam exhaust.
...	25	125	3,125	120	3,000	...	...	150	3,750	3,291	1	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	42	...	...	...	...	...	...	...	...	...	4	Furnace 73x32 feet.
8,660	..	...	...	...	...	...	...	...	...	...	7	Fire basket.
...	30	480	14,400	490	14,700	488	14,640	492	14,760	...	2	Steam exhaust.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	42½	...	...	...	...	...	...	...	...	...	12	Furnace 6½x30 feet.
...	...	...	...	...	...	...	...	...	...	...	2	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	2	Furnace.
155	98	130	12,740	120	11,760	140	13,720	125	12,250	...	4	Steam exhaust.
...	33	230	7,950	250	8,250	220	7,260	230	7,590	...	.	Natural ventilation.
...	...	150	6,552	120	5,418	130	5,790	160	6,888	...	1	Natural ventilation.
...	48	100	4,800	...	...	...	...	...	...	...	3	Natural ventilation.
...	16	400	6,400	...	...	...	...	...	...	...	3	Small furnace.
...	24	110	1,980	...	...	...	...	186	4,461	...	2	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	2	Small furnace.
...	56	158	8,848	155	8,680	160	8,960	157	8,992	...	..	Natural ventilation.
...	64	...	...	...	...	...	...	110	9,516	...	..	Steam exhaust.
...	56	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	44	500	24,000	...	...	...	...	...	...	...	..	Furnace.
...	...	...	...	...	...	...	...	...	...	...	..	Steam exhaust.
...	51	365	18,650	380	19.380	415	21,165	405	20,655	...	..	Fan 12 feet diameter.
...	40	625	25,000	625	25,000	625	25,000	625	25,000	...	..	Fan 12 feet.
...	34	600	20,400	575	19,550	540	18,360	570	19,380	...	30	Furnace 48 feet.
...	65	380	24,700	395	25.675	375	24,375	400	26,000	...	..	Furnace.
...	...	...	28,350	...	24,000	...	23,275	...	22,575	...	..	Furnace.
...	...	...	20,060	...	18,070	...	18,575	...	18,690	...	..	Furnace.
...	...	...	15,900	...	16,800	...	16,200	...	15,600	...	..	Fan 6 feet diameter.
...	...	...	...	...	...	...	...	...	...	...	..	Small furnace.
125	48	56	2,688	45	2,160	72	3,456	130	6,240	3,636	18	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	56	80	4,500	...	...	70	3,938	...	...	...	15	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	..	Furnace.
...	...	...	...	...	...	...	...	...	...	...	13	Natural ventilation.
...	...	...	...	...	...	...	...	...	...	...	.	Natural ventilation.
...	36	250	9,000	...	...	...	...	...	...	...	2	Furnace & st'm exhaust.
3,965	30	210	6,300	210	6,300	216	6,480	220	6,600	6,420	7	Steam exhaust.
130	48	160	7,680	150	7,240	145	6,960	150	7,240	151	4	Furnace.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	56	310	17,720	335	18,810	350	19,600	...	...	...	3	Steam exhaust.
...	...	...	...	...	...	...	...	...	...	...	6	Furnace.
...	...	90	10,800	...	...	...	...	...	...	...	..	Fan 12 feet diameter.
...	...	...	...	...	...	...	...	...	...	...	7	Natural ventilation.
...	42	...	...	...	...	...	...	...	...	...	2	Small furnace.
...	...	...	...	...	...	...	...	...	...	...	..	Natural ventilation.
...	35	300	10,500	...	...	...	...	200	7,000	...	3	Natural ventilation.
7,290	35	...	...	...	...	...	...	...	...	...	3	Furnace & st'm exhaust.
...	49	...	...	...	...	...	...	147	7,497	...	2	Natural ventilation.

A STATEMENT *of the Names, Power, Capacty, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Lemont Mines,	....	....	90	2,400	90	2,400	90	2,400	90	2,400
Ocean Mine,	....	....	....	....	141	5,922	....	....	125	5,250
Duquesne Mine,	....	....	....	....	....	....	....	....	....	....
Latrobe Mines,	....	....	....	....	....	....	....	....	....	....
Chartiers Gas Coal Mines,	....	....	....	....	....	....	....	....	....	....
Enterprise Mine,	278¾	....	250	10,000	275	11,000	230	9,200	245	9,800

Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.												HOW VENTILATED.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.				
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Number of headings.	
21	22	23	24	25	26	27	28	29	30	31		
....	16	...	.....	...	.....	...	.....	...	.....	.....	2	Natural ventilation.
2,400	48	...	.....	...	.....	...	.....	...	.....	.....	2	Steam exhaust.
...	42	...	.....	213	8,946	...	.....	210	8,820	.....	..	Furnace.
....	302	127	38,354	143	43,186	124	37,448	129	38,958	.....	4	Natural ventllation.
....	...	...	.....	..	.....	...	.....	...	.....	.....	..	Natural ventilation.
....	...	...	.....	...	.....	...	.....	...	.....	.....	..	Furnace.
250	50	280	14,000	295	14,750	265	13,250	290	14,500	.....	..	Furnace & st'm exhaust.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Philip Wise,	52	Married,		November 2,	
——— Robinson,	13	Single,			
Daniel Phillips,	65	Married,		November 12,	
John Christopher,	45	Married,		November 23,	
Frederick Harding,	45	Married,		November 20,	
George Holden,	30	Married,		November 23,	
George Calfhead,	55	Married,		November 26,	
William Birch,		Married,			
Alexander Baine,	67	Married,		November 16,	
John Edmonds,	14	Single,		November 7,	
Samuel Sahli,		Single,		November 21,	December 3,
David Wilson,	21	Single,		November 30,	
Isaac Mitchell,	38	Married,		November 23,	December 2,
James S. McCue,	60	Married,		November 23,	December 2,
J. J. Miller,		Married,		November 28,	December 2.
Daniel McGarvey,		Married,		November 28.	
Richard Evans,		Married,		November 28.	
Joseph Veyon,		Married,		Died Nov. 29.	
John Mowrey,		Married,		Died Nov. 28.	
Morgan McGill,		Married,		Died Nov. 29.	
William Smiley,		Single,		Died Dec. 6.	
Thomas Maner,				November 28,	
W. A. Keffer,					
E. Franks,					
L. Beck,					
John Dougherty,					
L. Sheets,					
James Riley,					

The accident by which the above were killed and injured occurred at the Uniondale mines, operated by Reid Brothers, located near Dunbar, Fayette county. The facts of the case would appear to be about as follows: On November 27th a destructive storm passed over this part of the county, which blew down the stack of the boiler, located near the pit mouth, and used for generating steam to work the pump for draining the mine of water, and not wishing to stop the mine a steam-blower was used to keep up the steam. Reid Brothers had procured a new stack, and these men were getting it into position, and had so far succeeded as to get it into an upright position when it was found that the steam from the blower prevented the further progress of the work, and instructions were given by Joseph Veyon to shut the safety-valve and open fire-door, which order was obeyed, when a terrible explosion occurred, hurling three poor fellows into eternity in the twinkling of an eye, and mangling and scalding others in a

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of November, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed by fall of roof, . . .	At Mount Equity mine, Kimble Coal and Iron Company. Inquest held. Verdict, accidental.
Hurt by coal drill, ...	At Ocean mine, W. L. Scott, operator.
Broken leg, ...	At Amity mine, J. C. Risher & Co.
Bruised about the body, .	At Amity mine, J. C. Risher & Co.
Collar bone broken, . . .	At Hersh mine, J. J. Hoblitzell, operator.
Hurt slightly, ...	At Hersh mine, J. J. Hoblitzell, operator.
Broken leg, ...	At Beck's Run mine, H. B. Hays & Bro., operators.
Leg bruised by fall of coal,	At Larimer's, Westmoreland Coal Company.
Killed by falling slate, . .	At Horner & Robert's mine. No inquest was held. Investigation held by me, November 25. He and his son, Hugh Baine, were working together in a room when a piece of slate fell, striking him upon the head. He died about four hours afterward.
Killed by falling slate, . .	At the Chartiers Gas Coal Company, James Clark, operator. Inquest held. Verdict, accidental.
Killed by falling slate, . .	At Warne & Co.'s mine. Thomas Robinson said he was sitting at the mouth of his room, November 21. He heard a fall, and Sahli called out. He went to his assistance and found him lying on his back, hurt with falling slate. He died in a few hours. No inquest was held.
Burned slightly, ...	At Horner & Robert's mine, by explosive gas. There had been a fall of roof, and after it had settled, he went on top of the fall to see its extent, when the gas ignited. He was burned very slightly.
Burned by explosive gas, ...	This accident occurred at the Ferguson slope, operated by H. C. Frick & Co. The mine has been idle since last spring, and preparations were making to start up. Mr. McCue had been engaged as mining boss. He and Mr. Mitchell, the engineer, were making an examination with regard to a second opening. Getting upon a fall, ignited the gas with a naked light, and both were burned.
Seriously injured.	
Seriously injured.	
Seriously injured.	
Seriously injured.	
Seriously injured.	
Seriously injured.	
Seriously injured.	

most horrible manner. Four have since died—making in all seven deaths and seven seriously injured. Coroner Shipler held an inquest, and was occupied three days taking testimony, when the following verdict was returned: From the evidence we find J. J. Miller, Daniel McGarvey, Richard Evans, John Mowery, Joseph Veyon, and Morgan McGill, came to their death from injuries received by explosion of steam boiler at Reid Brothers' works, on Thursday, November 28, 1878, and further find from evidence said explosion was caused by deficiency of water in said boiler.

(Signed) WM. SPEERS, *Deputy Coroner.*
MAURICE HEALY, DAVID MAHENEY,
DAVID WILLIAMS, C. H. KIMBLE,
A. HARMAN.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the nia, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Shaft, No. 2,	Penn Gas Coal Company,	Bituminous,	Slope & shaft,	. .	. .	. .
Shaft, No. 1,	Penn Gas Coal Company,	Bituminous,	Shaft,	. .	. .	. .
Coal Run Mine,	Penn Gas Coal Company,	Bituminous,	Drift,	.	. .	. .
Mine, No. 4,	Penn Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Larimer's	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Spring Hill,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
South Side Mine,	Westmoreland Coal Company,	Bituminous,	Drift,	. .	. .	. .
Foster Slope,	Westmoreland Coal Company,	Bituminous,	Slope,	. .	. .	. .
Plum Creek,	N. York & Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Sandy Creek,	N. York & Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Mine, No. 4,	N. York & Cleveland Gas Coal Co.	Bituminous,	Drift,	. .	. .	. .
Six Mile Ferry, No. 2,	H. B. Hays & Bro.,	Bituminous,	Drift,	. .	1	12
Beck's Run Mine,	H. B. Hays & Bro.,	Bituminous,	Drift,	2	1	10
Enterprise Mine,	Dillinger & Suttle,	Bituminous,	Drift,	. .	. .	. .
Cumberland Mines,	J. W. Williams,	Semi-bitum.	Drift,	. .	. .	. .
Six Mile Ferry, No. 1,	H. B. Hays & Bro.,	Bituminous,	Drift,	1	1	10
Caledonia,	Gray & Co.,	Bituminous,	Drift,	.	. .	. .
Eldorado,	Zuck & Henry,	Bituminous,	Drift,	. .	. .	. .
Nixon Mines,	Chartiers Valley Coal Company,	Bituminous,	Drift,	. .	. .	. .
Union Coal Works,	M. Graber & Co., limited,	Bituminous,	Drift,	. .	3	28
Millwood Shaft,	Millwood Coal and Coke Co.,	Bituminous,	Shaft,	1	2	. .
Mt. Braddock,	Colvin & Torrence,	Bituminous,	Slope,	1	1	. .
Chartiers Gas Coal Mines,	James Clark,	Bituminous,	Slope,	1	2	26
Pine Run,	James Lynn & Co.,	Bituminous,	Drift,	1	1	. .
Greensburg Mines,	Greensburg Coal Company,	Bituminous,	Drift,	. .	. .	. .
Iron City,	Phillips & Mettenzsway,	Bituminous,	Drift,	2	. .	. .
Buckeye Mine,	John Cochran,	Bituminous,	Drift,	2	. .	. .
Loyalhanna C. and C. Co.	Loyalhanna Coal and Coke Co.,	Bituminous,	Slope,	.	. .	. .
Youghiogheny Mines,	James O'Neil,	Bituminous,	Drift,	. .	. .	. .
Conn. C. & C. Co's mines,	Conn'lle Coal & Coke Co's mines,	Bituminous,	Slope,	3	1	75
Mount Equity,	Kemble Coal and Iron Company,	Semi-bitum.	Drift,	. .	. .	. .
Cornell & Werlings,	W. H. Brown's heirs,	Rituminous,	Drift,	2	5	. .
Lemont Mines,	Ewing, Hanna & Co.,	Bituminous,	Slope,	1	1	30
Waverly Mines,	J. B. Corey,	Bituminous,	Drift,	. .	. .	. .
Braddock's Mine,	J. B. Corey & Co.,	Bituminous,	Drift,	. .	. .	. .
Rising Sun,	Markle & Co.,	Bituminous,	Drift,	. .	. .	.
Knob Colliery,	Knob Coal Company,	Bituminous,	Slope & shaft,	1	1	30
	Horner & Roberts,	Bituminous,	Drift,	2	1	. .
Leechburg Colliery,	D. B. Ashbaugh & Co.,	Bituminous,	Drift,	. .	. .	. .
Jefferson Mines,	Foster, Clark & Wood,	Bituminous,	Drift,	1	. .	.
Shafton Mines,	Shafton Coal Company,	Bituminous,	Shaft,	1	2	100
Nimick,	Thomas Fox,	Bituminous,	Drift,	. .	. .	. .
Amity,	J. C. Risher,	Bituminous,	Drift,	. .	. .	. .
Armstrong's,	C. H. Armstrong & Son,	Bituminous,	Drift,	. .	. .	. .
Smith's,	Moore & Smith,	Bituminous,	Drift,	. .	. .	. .
Cum'd & Elk Lick C. Co.,	Cumber'd and Elk Lick Coal Co.,	Semi-bitum.	Drift,	. .	. .	. .
Pitts.&Conn.G.C.&C.Co,	Pitts. and Conn. G. C. & C. Co.,	Bituminous,	Slope & shaft,	6	4	. .
Enterprise,	Hartley & Marshall,	Bituminous,	Drift,	1	1	40
No. 1,	Boyle & Hazletts,	Bituminous,	Slope,	1	1	60
No. 2,	Boyle & Hazletts,	Bituminous,	Slope,	2	1	60
Hersh,	J. J. Hoblitzell,	Semi-bitum.	Drift,	.	1	30
Hampton Mines,	John McIntyre,	Bituminous,	Drift,	. .	1	. .
Mansfield C. and C. Co.,	Mansfield Coal and Coke Co.,	Bituminous,	Drift,	1	1	12

respective Collieries in the First Bituminous Mine District of Pennsyl-
of December, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Ventilation.									
										1st week.		2d week.		3d week.		4th week.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	200	22	35	277	13	3	. . . .	3	106¼	. . .	25,000	. . .	25,000	. . .	25,000	. . .	25,000
. .	186	20	36	242	14	.	. . . . .	3	. . . .	. . . .	21,675	. . .	22,950	. . .	21,400	. . .	23,400
. .	154	26	42	222	15	5	9 Inlets	. .	. . . .	. . . .	19,500	. . .	21,700	. . .	24,200	. . .	22,400
. .	228	5	37	270	10	.	. . . . .	5	. . . .	. . . .	32,100	. . .	27,980	. . .	38,300	. . .	27,380
. .	70	. .	. . . .	70	. .	. .	6,282										
. .	28	5	. . .	33	. .	. .	2,807										
. .	77	6	. . .	83	. .	. .	7,835										
. .	108	2	. . .	110	. .	. .	8,559										
. .	117	25	30	172	. .	. .	2,465½	15	52½	200	11,250	110	6,188				
. .	153	41	58	257	24	5	5,871¾	21	48	180	8,640	257	12,136	185	8,880	290	13,620
. .	183	25	40	248	9	1	8,372½	4	1,023	38,069	1,056	39,214	1,090	40,557	1,135	42,230	
1	138	. .	18	156	10	. .	6,405	5	52								
2	171	. .	38	209	18	2	10,862	10	52								
. .	9	. .	7	16	2	. .	1,750	2									
. .	22	2	6	30	1	. .	1,000	4	106								
1	112	. .	28	140	8	1	6,450	6	52								
. .	6	. .	. . . .	6	1	. .	400										
. .	18	. .	1	19	2	1	2,404	2	12	. . .	. . . . . .	. . .	. . . . . .	. .	300	3,732	
. .	30	2	6	38	2	. .	1,800										
. .	93	10	33	135	15	4	5,736	5	56	180	7,812	160	6,882	200	8,515	210	8,988
6	55	8	10	73	6	. .	. . . .	2	50	300	15,000	260	13,000	320	16,000	300	15,000
2	33	2	8	43	6	2	6,240	2	25	280	7,000	285	7,125	284	7,100	286	7,150
1	43	2	9	54	3	. .	2,200										
1	115	11	13	139	8	3	7,840										
. .	20	. .	4	24	4	2	2,495	2	48	180	8,640	105	5,090	120	5,760	210	10,080
2	60	10	14	84	4	4	3,000	3	42	. . .	8,000						
2	15	. .	20	35	3	1	2,236	2	64								
. .	80	10	13	103	10	. .	. . . .	2	48	350	16,800	350	16,800	325	15,600	410	19,690
. .	120	10	21	151	7	. .	3,400	4	48								
2	32	3	3	38	3	. .	5,016	2	. . .	. . .	. . . . .	. . .	. . . . .	. .	. . . . .	98	8,644
. .	30	4	7	41	5	. .	2,786	2	. . .	270	6,683	340	5,980	400	9,900	280	6,930
4	180	15	33	228	8	1	8,205	4	50								
2	30	2	5	37	. .	. .	4,116	4	42	150	6,552	150	6,552				
									42	140	6,174	140	6,774				
									42	190	8,148	190	8,148				
. .	30																
.	. . .	. .	. . .	50													
. .	18	. .	3	21	2	1	3,786										
2	22	8	6	36	2	. .	1,200	2	60	98	5,880	100	6,000	100	6,000	100	6,000
1	160	.	40	200	16	1	8,800	3	54	400	21,600	*					
. .	60	10	10	80	5	. .	5,050	4	48	190	9,120	200	9,600	180	8,640	190	9,120
1	80	5	10	95	6	1	3,640	3	40	180	14,400	180	14,400	180	14,400		
4	31	4	4	39	3	. .	2,150	2	45	300	13,500	320	14,400	320	14,400	280	12,600
. .	24	. .	3	27	3	. .	1,020	2	42								
. .	170	16	30	216	11	3	10,752	4	56	. . .	7,000						
. .	80	10	14	104	6	. .	3,420	3									
. .	30	4	5	39	2	1	2,000	3	48								
. .	54	6	8	68	4	.	4,080	3	84	78	8,736	78	8,736	75	8,400	84	9,048
7	44	2	106	152	5	5	7,901	4	64	165	1,280	3,145	11,562	175	13,424	160	12,493
2	85	6	11	102	6	. .	6,500	3	45	200	13,500	315	14,175	210	13,950	325	14,625
2	21	1	7	29	3	1	1,694										
2	28	1	9	38	4	2	530										
1	35	2	6	43	3	1	2,500	2	21								
. .	140	10	20	170	8	. .	6,600										
1	85	5	28	118	8	2	3,103	13	48	90	4,320						

*Same nearly all the month.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Shaft No 2,	....	....	520	24,700	480	24,950	530	25,300	320	25,000
Shaft No. 1,	....	....	480	20,970	520	23,000	518	21,450	500	23,150
Coal Run Mine,	....	....	425	19,500	430	21,400	480	24,450	470	22,375
Mine No. 4,	....	....	520	31,000	530	32,100	610	38,000	505	27,400
Larimer's,	....	....	....	....	....	....	....	....	....	....
Spring Hill,	....	....	....	7,800	....	10,000	....	10,200	....	9,000
South Side Mine,	....	....	....	14,400	....	13,750	....	14,050	....	17,220
Foster Slope,	....	....	....	15,600	....	16,200	....	15,900	....	....
Plum Creek,	....	....	150	7,200	110	5,280	....	....	....	....
Sandy Creek,	228	129	90	4,320	80	3,840	90	4,320	80	3,840
Mine No. 4,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry, No. 2,	....	....	....	....	....	....	....	....	....	....
Beck's Run Mine,	....	....	....	....	....	....	....	....	....	....
Enterprise Mine,	....	....	....	....	....	....	....	....	....	....
Cumberland Mines,	....	....	....	....	....	....	....	....	....	....
Six Mile Ferry No. 1,	....	....	....	....	....	....	....	....	....	....
Caledonia,	....	....	....	....	....	....	....	....	....	....
Eldorado,	....	....	....	....	....	....	....	....	....	....
Nixon Mines,	....	....	....	....	....	....	....	....	....	....
Union Coal Works,	8,061	....	....	....	....	....	....	....	....	....
Millwood Shaft,	14,750	....	300	12,000	260	10,400	300	12,000	290	11,600
Mt. Braddock,	284	....	165	6,950	170	7,160	162	6,804	171	7,182
Chartiers Gas Coal Mines,	....	....	....	....	....	....	....	....	....	....
Pine Run,	....	....	....	....	....	....	....	....	....	....
Greensburg Mines,	151	....	....	....	....	....	....	....	....	....
Iron City,	....	....	....	8,000	....	....	....	....	....	....
Buckeye Mine,	....	....	....	....	....	....	....	....	....	....
Loyalhanna Coal & Coke Co.	....	....	....	....	....	....	....	....	....	....
Youghiogheny Mines,	....	....	....	....	....	....	....	....	....	....
Conn. C. & C. Co.'s Mines,	....	....	....	....	....	....	....	....	....	....
Mount Equity,	297½	7,393	130	3,120	120	2,880	140	3,360	60	2,310
Cornell & Werlings,	....	....	....	....	....	....	....	....	....	....
Lemont's Mines,	....	....	90	2,576	90	2,376	....	....	....	....
Waverly Mines,	....	....	....	....	....	....	....	....	....	....
Braddock's Mine,	....	....	....	....	....	....	....	....	....	....
Rising Sun,	....	....	....	....	....	....	....	....	....	....
Knob Colliery,	102	6,120	85	4,410	86	4,462	86	4,462	86	4,462
	....	....	200	9,600	....	....	....	....	....	....
Leechburg Colliery,	192½	....	150	7,200	150	7,200	165	7,920	160	7.680
Jefferson Mines,	....	....	....	9,300	....	9,300	....	....	....	....
Shafton Mines,	305	....	175	7,875	180	8,100	190	8,550	160	7,200
Nimick,	....	....	....	....	....	....	....	....	....	....
Amity,	....	....	....	7,000	....	....	....	....	....	....
Armstrong's,	....	....	....	....	....	....	....	....	....	....
Smith's,	....	....	....	....	....	....	....	....	....	....
Cumb'd & Elk Lick Coal Co.	78¾	....	....	....	....	....	....	....	....	....
Pitts. & Conn. G. C. & C. Co.	161¼	....	150	11,872	140	11,251	165	12,803	155	12,187
Enterprise,	....	....	250	10,000	265	10,600	240	9,600	275	11,000
No. 1,	....	....	....	....	....	....	....	....	....	....
No. 2,	....	....	....	....	....	....	....	....	....	....
Hersh,	....	....	....	....	....	....	....	....	....	....
Hampton Mines,	....	....	....	....	....	....	....	....	....	....
Mansfield Coal & Coke Co.,	....	....	80	3,840	....	....	....	....	....	....

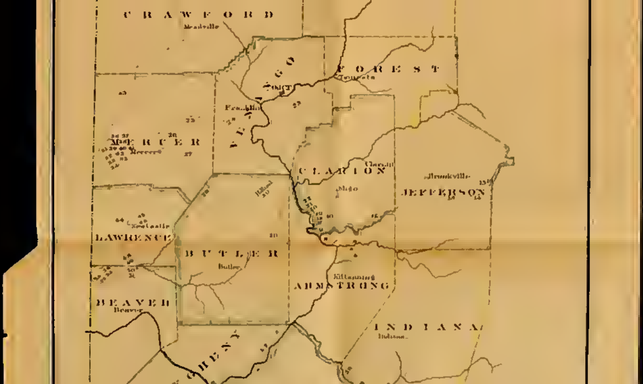
Collieries in the First Bituminous Mine District of Pennsylvania—Continued.

Ventilation.											How Ventilated.
		1st week.		2d week.		3d week.		4th week.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
	40	625	25,000	625	25,000	625	25,000	625	25,000		Fan 12 feet diameter.
	51	425	21,675	450	22,950	420	21,420	455	23,205		Fan 12 feet diameter.
	40	487	19,500	542	21,680	543	24,200	560	22,400		Furnace 30 feet long.
	49.11		32,100		27,980		28,300		27,380		Furnace ventilation.
			20,480		18,800		21,320		22,580		Furnace ventilation.
											Furnace ventilation.
			22,850		27,000		28,550		31,330		Furnace ventilation.
											Fan 6 feet diameter.
											Natural ventilation.
129	48	80	3,840	80	3,840	70	3,360	65	3,120	3,540	Natural ventilation.
		664	27,023	711	28,991	733	29,816	754	30,678		Natural ventilation.
											Furnace ventilation.
											Natural ventilation.
											Natural ventilation.
											Natural ventilation.
											Furnace 12 feet.
											Natural ventilation.
	49							56	4,320		Natural ventilation.
											Small furnace.
	36	160	6,888	150	6,552	190	8,149				Natural ventilation.
287½	100	100	10,000	*							Fan 12 feet diameter.
167	30	480	13,400	490	14,700	488	14,640	492	14,760		Steam exhaust.
											Furnace ventilation.
											Furnace 8 feet by 20 feet.
	25	250	6,250	175	4,375	200	5,500	280	6,000	5,406	Natural ventilation.
	42		10,360								Furnace 7 ft. by 30 ft. long.
											Natural ventilation.
											Steam exhaust.
											Natural ventilation.
								110	9,388		Steam exhaust.
112⅓	23	240	7,920	195	6,435	220	10,560	250	8,250	8,291	Natural ventilation.
42¼											Furnace 30 feet long.
	48	372	18,238	372	18,238	372	18,238	372	18,238		Steam exhaust.
											Natural ventilation.
											Natural ventilation.
											Natural ventilation.
86	30	200	6,000	204	6,120	201	6,120	208	6,240	6,120	Steam exhaust.
	48	500	26,000								Furnace 8 ft. by 30 ft. long.
	48	160	7,680	170	8,160	160	7,680	180	8,640		Furnace 6 ft. by 2, ft. long.
	36	290	10,400	290	10,400						Furnace and steam exh'st.
	98	150	14,700	165	16,170	160	15,680	140	13,720		Steam exhaust.
											Furnace.
	56		7,000								Furnace.
											Furnace.
	49										Furnace 4 feet by 6 feet.
	64	120	7,680	120	7,680	115	7,360	140	8,960	7,920	Basket grate.
152½	64	150	11.872	140	11,251	165	12,803	155	17,182	152½	Steam exhaust.
277½	50	310	15,500	315	15,750	300	15,000	320	16,000		Furnace and steam exh'st.
											Steam exhaust.
											Furnace 5 feet by 8 feet.
											Natural currents.
											Natural currents.
	48	90	4,320								Natural currents.

* About the same.

LIST OF ACCIDENTS *occurring in the Mines of the First Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
William Mooney, . . .	. .	. . . .	. . . .	December 4,	. . . .
Hugh Magan, ...	. . .	. . . .	. . . .	December —,	. . . .
James Jones, ...	. . .	. . . .	. . . .	December —,	. . . .
William Miller, ...	. . .	. . . .	. . . .	December —,	. . . .
Michael Dillon, ...	. . .	. . . .	. . . .	December —,	. . . .
Crosby McCafferty, . .	. . .	. . . .	. . . .	December —,	. . . .
Michael Hillman, . . .	. . .	. . . .	. . . .	December —,	. . . .
George Mitchel, ...	20	Single, . .	. . . .	December 15,	. . . .
W. J. Laymer, ...	. . .	. . . .	. . . .	December 20,	. . . .
Patrick Moore, ...	. . .	. . . .	. . . .	. . . .	. . . .


CRAWFORD
Meadville
VENANGO
Franklin
FOREST
Tionesta
MERCER
Mercer
CLARION
Clarion
JEFFERSON
Brookville
LAWRENCE
Newcastle
BUTLER
Butler
ARMSTRONG
Kittanning
BEAVER
Beaver
INDIANA
Indiana

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of December, 1878:

NATURE OF ACCIDENT.	REMARKS.
Hurt about the body by falling slate, .	At G. & W. Jones' mine.
Shoulder bruised, ...	At the South Side mine, Westmoreland Coal Company.
Hand cut, ...	At the South Side mine, Westmoreland Coal Company.
Slightly bruised, ...	At the South Side mine, Westmoreland Coal Company.
Slightly bruised, ...	At the South Side mine, Westmoreland Coal Company.
Crushed by fall of coal, ...	At the Foster slope, Westmoreland Coal Company.
Slightly hurt, ...	At the Foster slope, Westmoreland Coal Company.
Slightly hurt by slate, ...	At Cornell & Werling's mine, operated by W. H. Brown's heirs.
Killed by fall of slate, ...	At the Pennsville mine, A. H. Sherrick. Inquest held. Verdict, accidental.
Hurt by blast, ...	At Leechburg colliery.

SECOND DISTRICT.—J. J. Davis, Inspector.

To the Honorable WILLIAM McCANDLESS,
Secretary of Internal Affairs:

SIR: In sending my closing report for the year 1878, as mine inspector of the second district of the bituminous coal mines of this State, I beg leave to state that owing to the general depression of the business industries of the country, that the branch of coal mining has suffered severely. Whenever a rolling-mill stops, a blast furnace is blowed out, an oil refinery suspends, it effects coal mining. In fact, in most all manufacturing departments where machinery is used, and where heat and steam are required, coal is in demand. And any interruption in their operations, has a telling influence upon the production of coal. When commerce on our lakes and rivers slackens, our traffic on railroads lessen, the coal trade is made to suffer.

I have received many letters during the year, stating "that business on the lake is dull, the railroads are not using much of our coal." Dull times. "We have not been able to make the improvements you suggested, on account of the mine not running but very little since you were here." Such are often the reasons assigned for the delay in the accomplishment of much needed improvements. Many of the mines have been dragging along barely able to meet running expenses, affording employment to their men one half or one fourth time, and that at very poor pay. The condition of many of the families depending on coal mining in some of the mines for sustenance, have been in a deplorable state.

Some mines have been more fortunate than the others in having a larger portion of the demand to fill, &c. It is well known to every person of practical experience in mining, that the more constant a mine is kept running the more easy it is to keep it in proper condition.

I have furnished you with a list of accidents as they were reported from the mines. On the investigation of those accidents that proved fatal, I found, from the testimony of the parties that were present and near by at the time of the accidents, also from the appearance of the places after the accidents occurred, that they were the results of much carelessness and risk in the parties themselves. In some of the cases I was informed by some of the men working in the same parts of the mines that, a short time before the accidents happened, that they had been with the parties warning them of the danger, also advising them to secure the place in order to avoid it; but, undoubtedly, they thought they were safe and still persisted in continuing on with their work, until they were caught. I hope that cases of this nature will be a warning to others in the future.

I have also furnished you with a list of the collieries and names of the parties operating and having charge of the mines, with their post office address.

There are many mines in this district idle, and have been idle for some time. Others that do not come at present under the provisions of the law, on account of having reduced their men to only a few in number, which they keep working for the purpose of keeping the mine in order for the future.

The monthly reports contain the number of persons employed. Number of mules, the machinery used, the monthly production of coal mined during each month; also under the head of ventilation the weekly air measurement, as recorded and reported by the mining bosses. In some instances, in my visits, I find matters as if there had been at sometimes a little tendency to stretching, and in other instances I find that there has not been proper justice done to the mine on account of the measurements only been partly taken, that is, only been taken in parts of the mine, and not in all the splits.

The law requires the air to be measured at least once a week, and a record kept of such measurements, and reported to the inspector. The atmosphere is an ocean of air subject to many changes and convulsions. The air of mines is effected by the condition of the atmosphere on the surface, also by many changes occurring in the mine, independent of those on the outside, and, although it is not impossible to have the same results for several measurements, yet it seems, to say the least, rather doubtful.

Accompanying the present report, I have also given you a short description of the condition and mode of working of some of the mines, and the manner in which the ventilation and drainage are produced. I have endeavored in all my visits to impress upon the parties having charge of mines, the importance of having their mines well regulated and properly conducted for their own benefit, and also for the benefit of those employed.

W. W. Smith, in his work on coal and coal mining, says: "It needs no argument to impress on those who know the necessity of ventilating our public and private rooms, that it is in a high degree essential to take thought for the re-placement of vitiated by fresh air, in the low and often complicated chambers of coal mines, where many men and horses are engaged in hard work, and where numerous lights, with gunpowder smoke and dust, aid in contaminating the atmosphere. But, in the workings of a colliery, additional causes come into play; a slow, yet constant change takes place in the surface of the substances exposed to the air, and the general result is the absorption of oxygen; a large amount of watery vapor requires removal; the poisonous gas, carbonic acid, is frequently given off; and, more commonly, the insidious fire-damp, or carbureted hydrogen, exudes from the surfaces of the bared coal, or sometimes bursts from it in violent jets. The amount of air required for the health and safety of the men will, therefore, vary much in different localities, according to these unequal conditions. Notwithstanding the undoubted phenomena of the diffusion of gases, their intermingling in the chambers and drifts of mines are only partial, and the specific gravity of the gaseous bodies is practically a very important guide in testing their presence and enabling them to be dealt with.

"Thus carbonic acid, (CO_2.) with a specific gravity, as compared with air of 1.524, tends to occupy the deeper parts of excavations, and renders it unsafe, when they have been disused, to enter them without precaution.

"Sulphureted hydrogen (HS) here and there evolved continuously, very poisonous, but readily detected by its offensive smell, is also slighly heavier than air; carbonic oxide, (CO) most deadly, but occurring rarely from natural causes, is 0.970. Fire-damp, or light carbureted hydrogen, (CH_4,) the *grison* of the French miners, has a sepecific gravity of 0.555, and is, therefore, commonly found to float along the upper portion of levels, to escape of itself from workings carried down hill, and to lodge in hollows or the higer parts of excavations."

There have been furnaces built in many of the mines in this district within the year 1878, and fans erected at others, and with but very few exceptions a general disposition shown favorable to improvements, in fact many of the parties take pride in having their mines fully up to the requirements of the law, but still there may be parts of some mines that need further improvement. Robert Smith, (at one time chief of the ventilating department at Coxlodge colliery, England,) in describing his inspection of a mine says: "After passing through the inner door, we find ourselves entering into a dull, drowsy atmosphere, which evidently denotes a serious innovation on the general current of air, and shows to our views the eruptions of nature in the mine which is sending fourth its gases and noxious effluvium, its acids and oxides, and the respirations of, perhaps, two hundred and fifty men, boys, and horses. The effect of all these causes is that the air has lost the cheering vitality of the oxygen. The affinity of the latter to these mineral bodies, by causing them to unite, have destroyed all the former elasticity of the atmosphere, which has become now by this chemical process of nature a fluid body quite different in its character, and which must, therefore, be treated by laws suitable to its present organization.

"In a proper system of ventilation, the aim is to give it space and ample area in the passages it has to return in from the interior of the mine, according to and in unison with its bulk of matter. For be it understood those gases generated by the different strata in the mine, whether they be as an aeriform gas or a vapor fluid, have their solid particles, and cannot be compressed without friction, which immediately becomes an obstruction to the general volume of air. Consequently in an extensive mine as this is, with four or five working districts, each aired with a divisional split from the general volume of air, there should not be less, than four drifts for the air to return back in, and each of these drifts should contain from thirty to forty feet area to be equivalent to the ingoing drift. For instance, from the accumulated mass of matter generated throughout the whole extent of the mine, it must be obvious to the practical observer, who has carefully studied the elements of nature, that carbonic acid will, nay must, be the predominant portion of the returning volume of air, inasmuch as it exists in union with earth and stone in vast quantities, however, far they may be hid from the surface of the atmospheric boundary.

"This alone may tell us, in indisputable language, the vast increase of area required to permit the returning volume, composed of such material, to glide through its passages without obstruction back to the furnace and upcast pit."

The cause of the air current being so feeble in many of the mines is attributable to the contracted condition of the air-courses, if the air-courses were made large and roomy, and kept clear of obstructions, they would give quite a different result, and the more smooth and even the sides and the straighter the course, the better. In many of the mines where there are passages made through the ribs or pillars, the gobs are allowed to be filled up and the only room left for the air to travel is over the top of the gobs. When a break through is made there should be a sufficient space left for the air to pass through unobstructed.

During the year, for the use of this office, I have taken a copy of the map of some of the mines, and I have been furnished a copy from other mines through the kindness of other parties, and there are others who have promised copies. In my opinion, it is important that the inspector should have a map of each mine.

Very respectfully yours,

J. J. DAVIS,

Mine Inspector, Second District, Bituminous Coal Mines.

LIST OF ACCIDENTS *reported to the Inspector of the Second Bituminous Coal District of Pennsylvania, and cause of each Accident, as found by investigation, for the year ending December 31, 1878.*

DATE.	NAME OF PERSON INJURED.	Age.	MARRIED OR SINGLE.	No. of orphans.	NAME OF COLLIERY.	LOCATION OF COLLIERY.	NATURE AND CAUSE OF ACCIDENT.
Jan. 5,	Joseph Zeigler,	24	Married,		Pacific slope,	Near Sharon, Mercer co.,	Foot injured by a pick.
Jan. 14,	Christian Carrel,	60	Married,		Bellvue mine,	Hite, Allegheny county,	Injured by a prop falling on his leg.
Jan. 17,	Thomas Wardman,	26	Married,	1	Beaver mine,	Lawrence county,	Scull fractured by a fall of coal; died in about twenty-four hours after carried home.
Jan. 25,	Peter Rafter,	42	Married,		Home bank,	Mercer county,	Leg broken above the ankle; caused by a blast.
Feb. 27,	Ralf Welsh,		Married,		Beaver mine,	Lawrence county,	Injured by a fall of slate.
May 3,	D. Woflington,	23	Married,		Natrona mine,	Natrona, Allegheny co.,	Face slightly burned by explosion of a squib.
May 7,	Andrew Swinson,	23	Single,		Pardoe mine,	Pardoe, Mercer county,	Leg fractured by fall of roof in room.
May 29,	William Miles,	35	Widower,	1	Barnes mine,	Butler county,	Killed by a fall of rock in entry, loosened by shot.
May 31,	Robert Bevridge,	45	Married,		Hickory shaft,	Mercer county,	Squeezed by a loaded car.
June 14,	John Pearson,	23	Single,		Fairmount,	Clarion county,	Hips and abdomen bruised by a fall of rock, cause by a premature fall of coal.
June 30,	Andrew Barnhard,	21	Single,		Oakland No. 1,	Mercer county,	Barnhard and Mehan killed by black-damp; caused by Barnhard thoughtlessly going down the air-shaft after the mine had been abandoned; Mehan by trying to save him, was also smothered by the gas.
June 30,	Peter Mehan,	45	Married,	5	Oakland No. 2,	Mercer county.	
Aug. —,	James Thomas,		Married,		Barnes mines,	Butler county,	Slightly hurt by fall of roof; absent from work six days.
Sept. 14,	Thomas Creggs,	35	Married,		Stoneboro' mines,	Mercer county,	Injured by coal falling on him; slightly bruising left leg and breaking collar bone.
Oct. 14,	Barney McKenna,	19	Single,		Orangeville shaft,	Mercer county,	Leg broken by a fall of roof on entry.
Oct. 14,	Jacob Froman,	14	Single,		Orangeville shaft,	Mercer county,	Leg broken by a fall of roof on entry.

LIST OF ACCIDENTS *reported to the Inspector of the Second Bituminous Coal District of Pennsylvania—Continued.*

DATE.	NAME OF PERSON INJURED.	Age.	MARRIED OR SINGLE.	No. of orphans.	NAME OF COLLIERY.	LOCATION OF COLLIERY.	NATURE AND CAUSE OF ACCIDENT.
Oct. 17,	J. Eden, ...	41	Married, .	. . .	Fairmount mine, .	Clarion county, ...	Leg fractured. He had shot down a large lump of coal, and was standing along side of it while his son was breaking it. when a portion of it broke and struck him on the leg, fracturing below the knee.
Oct. 21,	William Dingle, . .	53	Married,	. . .	Neshannock No. 2,	Mercer county, ...	Finger smashed by coal.
Nov. 14,	John Stapleton, . .	19	Single, . .	. . .	Maple grove, . . .	Venango county, ...	Foot smashed by falling under railroad car.
Dec. 18,	Thomas Gilbert, . .	48	Widower,	4	Catfish mine, . . .	Clarion county, ...	Body bruised by fall of roof; died December 22.

MINES ON THE ALLEGHENY RIVER.

Bellevue Mine.

This mine employs about one hundred persons. The coal is used for mill purposes. Operated by P. Y. Hite. The mine has been working about twelve years. Mr. Watt, the mining boss of this mine, in giving the characteristics of the mine in his monthly report, says: "In some parts of the workings the coal is nine feet thick, and in other places only six. The coal is thickest in the swamps, and thinest on the ridges."

The ventilation of this mine is produced by exhausted steam. The mine roads are all laid with T iron rail, and kept in good condition. On account of the dips of the coal and the unevenness of the bottom, they are compelled to use steam pumps for drainage. At times this mine is troubled with carbureted hydrogen gas.

Etna and Vesuvius Mine.

This mine was formerly operated by Spang, Chalfant & Co. and Lewis, Dalzell & Co. But since work in the mill of Lewis, Daltzell & Co. has been suspended, the mine has been stopped most of the time. The seam of coal worked, is the same as that worked at the Bellevue mine. Subject to the same irregularities, and troubled in the same manner with the gases. Hugh Wood, is the mining boss at this mine. The ventilation is produced by furnace, which has about forty feet of heating surface. Length of furnace arch about eleven feet. Mine has been in operation nearly twelve years, and during which time, has shipped a large amount of coal to the above mills, &c. But for some time past, the mill owners have been using gas from some of the gas wells in Butler county in their works, and consequently have lessened their consumption of coal.

Natrona Mine.

Mine operated by drift driven into the side of the hill. This mine has been in operation over twenty years, and is rather difficult to ventilate. When first opened, the extensiveness of the area to be worked through these openings was partly lost sight of, and it appears that the object was to get coal for the time being, without much system in view for the future workings of the mine. The parts nearest the crop worked out, and the present workings driven in to a considerable distance, effecting the ventilation. The character of the roof is strong, affording safe cover in the rooms and working faces. The main roads are dry, and laid with iron rail. The drainage of the mine is produced by steam pump. Mr. Richards, the general manager of the works, is anxious to improve the ventilation, and to have the mines in all respects up to the requirements of the law; and I think, with the improvements anticipated, that there will be ample means afforded for that purpose.

The air reports from this mine gives the air less than what it should be, because of having been taken only in one division; whereas it should have been taken in all the different splits.

The coal taken from the mine has been consumed by the owners in their extensive works, and the mines have been, as a general thing, constantly running.

Pine Creek Furnace Mines.

This colliery is located in Armstrong county. Operated by Brown & Mosgrove. The coal is coked on the ground, and used for making iron in blast furnace. They employ about twenty-five persons at coal mining. The drift has been in operation about ten years. It is worked on the room and pillar plan, the rooms twenty-one feet wide, and the pillars fifteen. The main roads are laid with T rail. Drainage and ventilation produced by natural means.

Stewardson Furnace Mines.

Has been in operation for a great number of years. It is worked for the purpose of supplying Stewardson furnace with coke. The coal is called the Freeport seam; it is from three to four feet thick, of fair quality. A drift opening, the hill next the coke yard worked out, and a tunnel kept open for the purpose of taking the coal through from the present workings. The distance of hauling is considerable, which accounts for the number of mules employed. The general condition of the mine favorable; but owing to a swamp, they have to resort to a syphon for the purpose of drainage. Ventilation fair.

Mahoning Furnace Mine.

This furnace has been blowed out. The mine, being a furnace mine, has been stopped, without much prospect of ever starting again.

Mahoning Coal Mine.

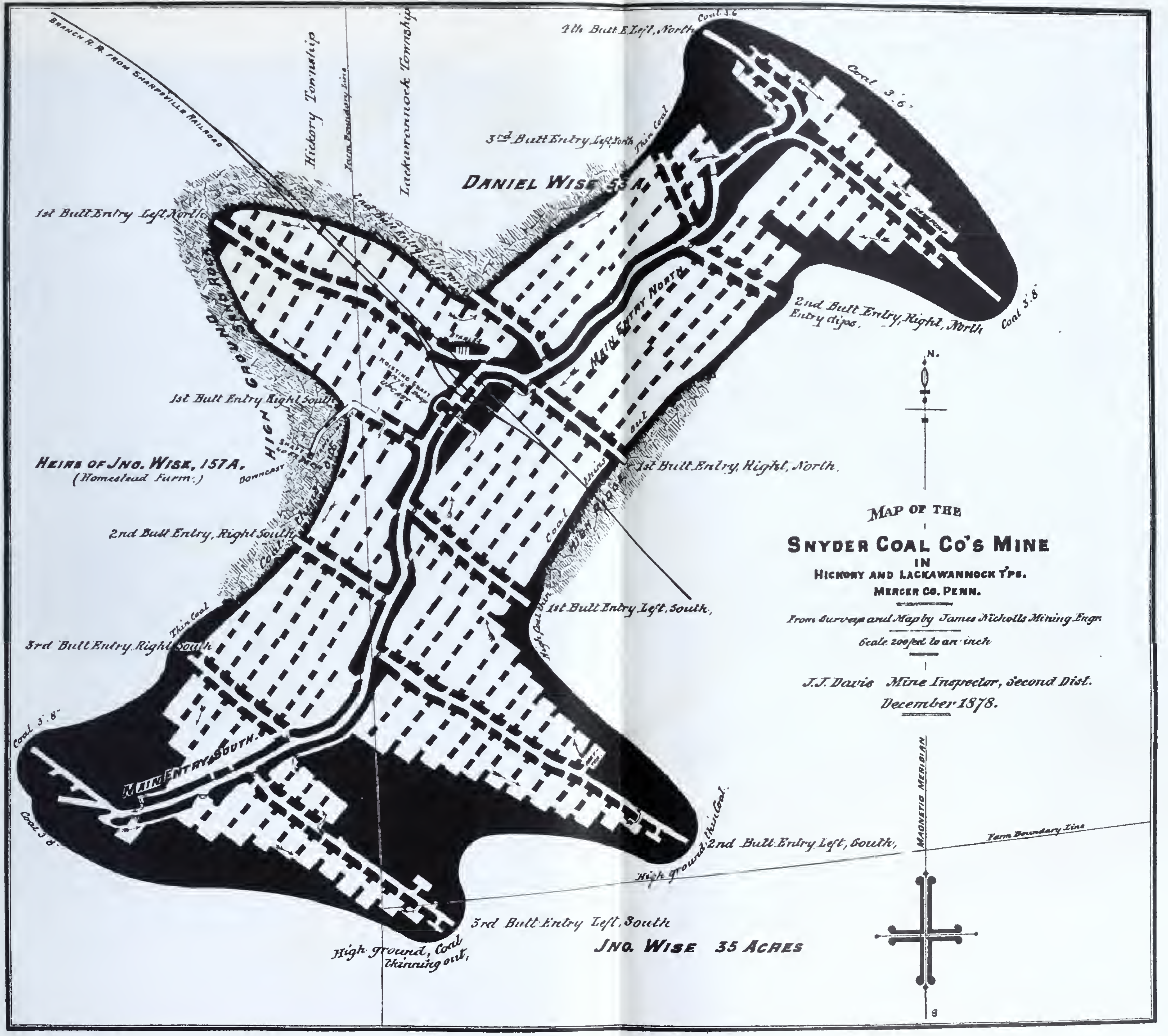
This is a railroad bank, operated by the Mahoning Coal Company. Owing to the depression of the coal business, the mine suspended operations last spring. Shipments of coal for the months of January, February, March, and April, inclusive, four thousand three hundred and eight tons.

Reimerton Mine.

Situated near Reimerton station, Allegheny Valley railroad. Operator E. J. Bowen. There has been but very little mining done in this mine during the present year.

Red Bank Furnace Mine.

This mine is mining the Freeport vein for furnace use. The object this year was to get sufficient coal to work up the stock. The furnace will be blowed out with the close of the year. The mine has been kept in a fair condition, as regards ventilation and drainage. Total number of tons mined during the year 1878, twenty-one thousand nine hundred and thirteen.



MAP OF THE

SNYDER COAL CO'S MINE

IN

HICKORY AND LACKAWANNOCK T'PS.

MERCER CO. PENN.

From Surveys and Map by James Nicholls Mining Engr.

Scale 200 feet to an inch

J. J. Davis Mine Inspector, Second Dist.

December 1878.

Catfish Mine.

The Catfish mine has been the most extensive mine on the Allegheny Valley railroad; but, for sometime past, it has not been turning out its usual product. The most of the work will be, from this out, drawing pillars and stumps back. I am sorry that I am compelled to the unpleasant duty of making a record of a serious accident that happened in No. 2 pit of this mine, December 18, which resulted in seriously injuring Thomas Gilbert, from the effects of which he died on the 22d. The accident occurred while drawing out an entry stump; caused by not propping in time, and although some of the men working close by him had warned him of the seeming uncertainty and the dangerous appearance of the roof, and even advised him to put a prop under it, still he persisted in working under it, thinking, undoubtedly, that it would remain safe until such time as would suit his purpose. After being notified of the accident by Mr. Mitchell, the mining boss, I visited the mine, and found that the rock had been removed; but, from the appearance of the roof, and the best of the judgment of parties that had seen it, it would have weighed about two hundred and fifty pounds. Circumstances of this nature should be a warning not to neglect the importance of standing props in time, when there is the least doubt in regard to the safety of the roof, many a life has been lost for this very reason. The general condition of this mine is satisfactory.

Lower Hillville Mine.

This mine is operated by the same parties as the Catfish mines—the Pittsburgh Coal and Mining Company. At present it is supplying the Allegheny Valley railroad with coal for its locomotives on the main line. The seam of coal and the system of mining is the same as that at the Catfish mines. The ventilation has been improved during the year by the building of a furnace, which, with proper attention, answers all purposes for the present.

Mineral Ridge Mine.

This mine is owned and operated by F. J. Skidmore, and has been one of the most steady running mines in this region the present year. They are working the same vein of coal as the Catfish mine, which is called, by geologists, the Kittanning seam. The coal is about three hundred feet above the level of the railroad, to which it is conveyed over an incline plane. The ventilation is produced by furnace. Owing to the increase of friction, and the long distance the air had to travel, they were compelled to build another furnace during the summer. Much of the friction of the air in the mine is due to the irregular and contracted condition of the air-courses. In visiting this mine I have endeavored, on all o casions, to impress upon the parties in charge the importance of having large and roomy air-courses, and as straight as circumstances will permit. I also ordered the enlargement of one of the inlets.

Monterey Mine.

Operated by J. McCollum, of Oil City. Located about a mile and an half from West Monterey. Will soon be finished. The work is all pillar work, and all the available coal will soon be robbed out. At present there are only a few persons employed.

Philadelphia Mine.

Mine located in Cranberry township, Venango county, about six miles from South Oil City. This mine has been running very irregularly the present year. Vein of coal thin, not averaging over thirty inches. Fire clay bottom. Coal sold at Oil City. A furnace used for purpose of ventilation.

MINES LOCATED ON THE LOW GRADE DIVISION OF THE ALLEGHENY VALLEY RAILROAD, IN CLARION AND JEFFERSON COUNTIES.

Sligo Branch Coal Mine,

Has two drift openings from which the coal is conveyed to the Sligo branch of the low grade division of the Allegheny Valley railroad over graded roads. Times have been rather dull around these mines the present year, owing to not having a steady contract, and the limited demand for coal. The seam of coal worked is the same as that worked on the Allegheny Valley railroad. Work in operation only part of the time.

Red Bank Colliery.

This mine is located in Madison township, Armstrong county, and connected with the low grade division of the Allegheny Valley railroad by a branch road. The mines have been idle for some time, but at present are leased by W. Welsh. There are three seams of coal opened, one a cannel and the other two a soft bituminous. Mr. Welsh is working the upper vein, and sometimes a chance car to fill in the cannel coal opening. The character of the working at the time of my visit were pillar work. I suggested some improvements, which I considered necessary, in order to properly ventilate the mine.

Fairmount Mine.

This colliery is situated at Fairmount station, the next station east of New Bethlehem, on the low grade division of the Allegheny Valley railroad. Operated by the Fairmount Coal Company. The coal is of superior quality, and always takes well in the market. The openings are drift openings, and the cover in many places light, affording easy access to the surface for means of ventilation. The total shipments for the year 1878 will be between forty and fifty thousand tons. The character of the roof in many parts of the mine is rather dangerous, being composed of fire-clay. The coal is largely used for oil refining purposes and for making steam and gas. It has also been used for coking purposes, and at present the company has in operation a washer for washing the slack.

Rocky Bend Mine,

Located near Fuller station, on the low grade division of the Allegheny Valley railroad, in Jefferson county. The mine has not been in operation but very little during the year 1878.

Hamilton Coal Mine.

The Hamilton coal mine is a new enterprise, opened at Reynoldsville, Jefferson county. Operated by the Hamilton Coal Company. The company has built over a mile of road to connect their mine with the low grade division of the Allegheny Valley railroad, on which road they intend to make their shipments. Drift opening. Only one entry driven at the time visited. Preparations made for ventilation.

Diamond Mine.

This mine is located near Reynoldsville, Jefferson county. Operated by Goodwill & Heim. Drift opening. Coal conveyed over an incline plane nine hundred and sixty-five feet long to schutes for preparation for shipment over the low grade division of the Allegheny Valley railroad. The coal is used for gas and steam. Thickness of workable coal five feet six inches.

Pancoast Mine.

Located about four miles east of Reynoldsville, on the lower grade division of the Allegheny Valley railroad, in Winslow township, Jefferson county. Operated by the Reynoldsville Coal Company. Drift opening with incline plane to bring the coal to the schutes. The coal in the mine from five to five and a half feet in thickness. Mine roads laid with T rails, and in good condition. Coal used for steam and gas purposes. Employed part of the year over forty persons.

Washington Mine.

Located in Winslow township, Jefferson county, about one mile east of the Pancoast mine. During the year there has been some changes made in its outside arrangements. The coal had heretofore been taken to the schutes over a circuitous graded road around the brow of the hill; but, at present, it is brought down direct over an incline plane, built under the directions of the superintendent, Henry Williams. Changing the outside, caused a corresponding change to be made on the inside. The mining done in this mine for the year was very limited.

MINES IN BEAVER AND LAWRENCE COUNTIES.

Several of the mines in this section have not been running during the year 1878, and many of the others only for a short time.

Mansfield Cannel Coal Mine.

Mine situated in Darlingron township, Beaver county. Drift opening. Been in operation for over forty years. The mine entry is about a mile long. The coal in parts of the mine has been very thick, in the present working it is about seven feet of cannel and one foot of soft bituminous. The basin averages four hundred feet in width. Ventilation effected by furnace and fan. The furnace has been re-built and enlarged during the year, also the stack has been enlarged. The coal from the mine is brought to the P., F. and C. R. R. at New Galilee.

Todd Mine.

There has been but very little mining done in this mine in the year 1878.

Sterling Mine

Has not been running during the year.

Baker Mine.

Mine operated by D. C. Benham, for Scott & Co. Capacity five thousand tons per month. Coal about three feet in thickness. Employ over one hundred persons. Ventilation effected by furnace. Coal shipped on the Pittsburgh and Erie railroad. The mine has only been in operation a part of the year, during which time the total shipments of coal, was twenty-two thousand five hundred tons.

Beaver Mine.

Owned and operated by Lee & Patterson. They own between three and four hundred acres, in fee simple and leased lands. The mine is a drift opening, connected by a graded road with the Pittsburgh and Erie railroad. For the first eight months of the year, the mine has averaged over four thousand tons per month. Employ over one hundred persons. Ventilation effected by furnace. On the 17th of January, a sad accident occurred in this mine, causing the death of Thomas Wardman. The accident happened by a fall of coal while bearing in. The deceased, and Joseph Pickup, were working at taking out entry stumps, one on each side of the entry. And a few minutes before the accident, Pickup had been over to Wardman's side, and while there inquired whether that coal was not dangerous to bear in under, to which Wardman answered, that it was safe enough; but soon after he returned to his own side, he heard something falling, and when he called on his partner to inquire what fell, he received no answer. On going over to see what was the matter, he fonnd the coal, some ton and a half in weight, had dropped in one solid cake, and that Wardman was lying with his head in under the edge of it. It required him to take a pick to break some of the coal before he got him loose. He lived about twenty-four hours.

Clinton Mine.

The Clinton Coal Company's property is joining the Lee and Patterson, and is connected with the Pittsburgh and Erie road, by the same graded road. This mine has had much improvements made in its drainage during the year, which were much needed. The capacity of mine is about two hundred and fifty tons per day. Been in operation eleven years. Ventilated by furnace. The coal is called the Beaver gas coal. For some reason, the mine has not been running since some time in the summer.

Welsh Bank.

The Wampum Coal Company's mine has been in operation since 1870 Capacity two hundred and fifty tons per day. Ventilation produced by furnace. Mine running very irregular through the year.

Davidson Mine.

Located near Wampum. Drift opening. Ventilation by furnace. Mine only in operation a part of the year.

MINES IN THE SHENANGO VALLEY REGION.

The mines of this section have been greatly effected this year by the suspension and failures of some of its large iron firms. Some of the most substantial enterprising and apparently prosperous firms in this section had to succumb and go under through the effects of the long continued depression of the iron interest of the country. Some of the parties had fought the hard times with vigor, clinging to the hope that they would be able to keep things moving, and that the days of prosperity would soon dawn, and crown their efforts with success; but in place of that they had to suffer their credit to be dishonored, their furnaces and mills to stop, and witness, as a consequence, the suffering of many a family. We hope that the year 1879 will favor us with better times. The coal of this valley is of superior quality, and well adapted to manufacturing iron. The openings are principally either shaft or slope openings, and the coal in many instances is very uncertain and irregular. Since my last report there has been four new shafts completed and put in operation.

The Wise Shaft.

Operated by the Snyder Coal Company, under the general management of Enoch Filer. The mine is situated in Hickory and Lackawannock townships. In consists of a shaft one hundred and twenty-eight feet deep; size of shaft, seventeen feet by eight feet. One engine, twelve-inch cylinder, four foot stroke; five boilers, each twenty-eight feet long, by thirty-six inches diameter.

The mine is opened both north and south, from bottom of shaft, by two main entries; one called main entry north, and the other main entry south. Off from each of these there are butt entries to the right and left, with proper distances between for rooms. From the first right hand butt entry, on the south side, there is a traveling way for the purpose of ingress and egress. The character of the coal is of superior quality. The mine makes considerable water. The ventilation by steam jet. There is a branch from the Sharpsville road up to the mine, over which the coal is taken to market. A map of this mine accompanies the report.

Home Bank Mines.

These mines consists of two shafts, No. 1 and No. 2. Operated by Buhl, Westerman & Co. Located in Hickory township, Mercer county. No. 1.—This shaft is one hundred and fifty-five feet deep; size eleven feet by eight feet. The workings, at present, are mostly pillar work. The thickness of coal has been from twenty inches to four feet. The character of the roof is, in some parts of the mine, rock, and in others slate, and the bottom is subject to the same changes—in some parts of the mine rock, while in others slate. Ventilation produced by furnace.

No. 2. This shaft is a new shaft sunk this year, one hundred and sixty feet deep; size sixteen feet by eight feet. One engine, twenty-five horse power; two boilers, twenty-four feet each in length, by thirty-six inches in diameter; one Cameron pump, No. 7, used for drainage. Both of these shafts are under the management of W. E. Williams.

Oakland Mines.

These mines consists of three shafts, located in Hickory township, Mercer county.

Oakland, No. 1, operated by Pierce & Scott. The workings in this shaft were finished about the middle of June, and the last coal taken out.

Oakland No. 2, operated by Pierce and Frampton. Situated near Five Points. There has been a new furnace built in this mine the present year, which has greatly improved the ventilation. A map of the mine accompanies this year's report.

Oakland, No. 3, is a new shaft sunk this year. Owned and operated by Pierce & Scott. The coal very irregular, with rock top through most of the mine. Ordered a second opening to be made. Robert Oakes is superintending all the Oakland shafts.

Neshannock, No. 2.

A new shaft operated by J. Phillips & Co., near Neshannock. At the time of my visit the appearance of this mine was not very promising. The cover or roof consisted of a slate, which in places is very soft and difficult to keep up, and requires a good deal of care. Some places it is of the nature of quicksand, and works down through crevices. The mine is very difficult to work. Adam Persch, the mining boss, did not know whether the mine would be kept running. I ordered, in case the mine should be continued, that a second opening be put down. They have been working part of their force at night in order to comply with the requirements of the law, the law only allowing twenty persons to be employed in the mine at one time until the second opening shall be reached and made available.

Hickory Mines,

Situated in Hickory township, Mercer county. Owing to some cause, this mine has not been working much this year.

Bethel Shafts Nos. 1 and 2.

Were both idle at the time of my visit.

Pacific Slope Mine.

This mine has been standing a considerable time this year, on account of the stoppage of the mill belonging to the parties to whom they furnished their coal.

Orangeville Shaft.

This mine is situated in West Salem township, Mercer county. Operted by the Morris Coal Company. Been in operation about three years and a half. The coal thin and irregular, the basin narrow. Compelled to work double turn, in order to find room for the men. Have two engines, one for hoisting, and the other for pumping. There is a fan used for to produce ventilation, been put up this year; also stairs built in the air shaft for the purpose of ingress and egress. Mr. Frack, the superintendent, is talking of sinking a new air shaft, as the pillars around the bottom of the present one will soon have to be drawn out. William Jones is the mining boss at present.

MINES ON THE SHENANGO AND ALLEGHENY RAILROAD.

Pardoe Mine.

Located near Pardoe station, on the Shenango and Allegheny railroad. Operated by the M. M. & M. Company. A drift opening, main entries on face of coal, and cross entries "on butt," with eighty yards apart. Distance between rooms eleven yards—seven yards for width of room, and four for pillar.

Fire-clay bottom, very undulating, which causes deep drains necessary to connect the different basins. The roof generally good. There are two steam pumps used to assist the drainage, which have been put in this year, instead of a mule pump used last year. The mine is much troubled with water. Thickness of coal about five feet. Position of vein about thirty feet above "Tionesta sandstone."

Mr. F. H. Oliphant, superintendent of the works, states, "that the year just past has been a very unprofitable one, the production being less than in the previous three years.

There has been stairs put in one of the air shafts for the purpose of ingress and egress, in case of an accident. There has also been additional length added to the top of one of the ventilating stacks. Ventilation is produced by furnace. Total production for the year ending December 31, 1878, thirty-four thousand five hundred and ninety-one tons.

Barnes Mine.

This mine is located near Harrisville station, on the Shenango and Allegheny railroad, in Butler county. Operated by the Mercer Mining and Manufacturing Company, the same party that operates the Pardoe mine.

Mine opened by a drift, opening into a vein of coal about three feet thick, lying much higher in the coal measures than the Pardoe seam. The system of working is the same as Pardoe. Entries driven on face and butt of coal, with the rooms about twenty-one feet wide, and pillars twelve. The hill above the mine is very light, affording but a thin cover, and causing the roof to be tender and dangerous in many parts of the workings, and allowing large quantities of water to pass through. In wet seasons it causes much trouble by closing up parts of the mine, and thereby interrupting the ventilation. The floor of the mine is composed of a bed of fire clay, which is very uneven, and of a rolling nature. Steam pumps are used for drainage, and exhaust steam for ventilation. There are several openings from this mine to the surface.

On the 29th of May, an accident happened in this mine, which caused the death of William Miles. Miles was working in an entry, and, before leaving for home, he had fired a shot in the roof, and, from anxiety to know what the shot had accomplished, he returned to the head of the entry, and it appears that he must have found the roof not down, and that he had gone under to sound it, and, while sounding, part of the roof must have dropped on him. When found, he was lying with his head and shoulders under the fall, with the head nearly severed from the body. Total shipments of this mine for the year ending December 31, 1878, thirty-seven thousand seven hundred and seventy-five tons.

Burnett Mine.

Owned and operated by Andrew Burnett. Located at Burnett station, on the Shenango and Allegheny railroad, Butler county. Ventilation assisted by exhaust steam. This mine has not been long in operation, and has been on stop for some time during this year. Mr. Burnett intends putting a shaft down as soon as the working is further advanced, which will benefit the ventilation of that section of the mine.

Jackson Centre Mines.

This mine belongs to Jacksons Coal Company. Connected by a branch road with the N., C. and F. R. R. It is opened by a drift, and is subject to the same irregularities as the other mines of this neighborhood. The bottom is very uneven and undulating. Entries are driven on face and butt of coal, with air-courses driven parallel with the entries. The rooms are six yards wide, with pillars nine feet. The top is soft and weak, letting a large amount of water through, for which reason it makes it very uncomfortably working in many parts of the mine. The ventilation is pro-

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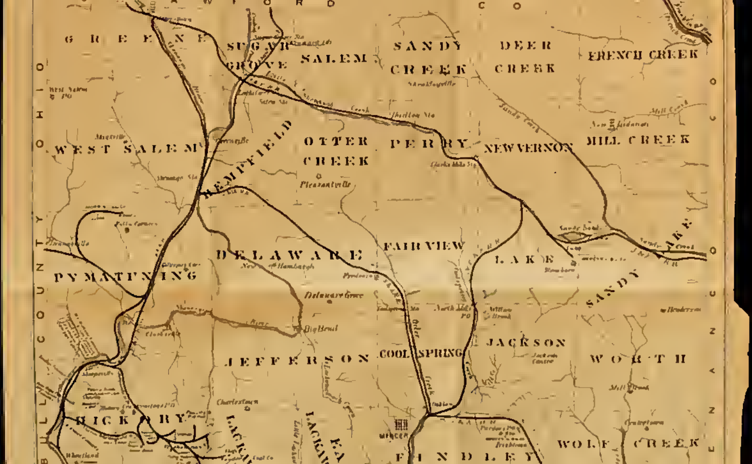

C R A W F O R D
C O
G R E E N E
SUGAR GROVE
SALEM
SANDY CREEK
DEER CREEK
FRENCH CREEK
WEST SALEM
HEMPFIELD
OTTER CREEK
PERRY
NEW VERNON
MILL CREEK
Pleasantville
DELAWARE
FAIRVIEW
LAKE
SANDY
PYMATUNING
Delaware Grove
Big Bend
JEFFERSON
COOL SPRING
JACKSON
WORTH
HICKORY
Charlestown
LACKAWANNOCK
MERCER
FINDLEY
WOLF CREEK
O H I O
T R U M B U L L C O U N T Y
V E N A N G O C O

duced by furnace; the air conducted around the working faces through the air-courses, and directed by doors at proper locations, and finally lead to the upcast over the furnace fire. The coal is dumped over screens near the mine into the railroad cars. Mined, in 1878, between fourteen and fifteen thousand tons.

Stoneboro' Mines.

Mine owned and operated by the Mercer Iron and Coal Company. The openings are located within the borough limits of the town of Stoneboro'. The opening consists of a slope, and the coal brought from the mine to the schutes by a stationary engine of seventy-five horse power. The mine is an extensive one, having been in operation over thirteen years, during which time a large amount of coal has been mined, and a large area of underground gone over. It is much troubled with carbonic acid gas, generating in great quantities. There are two furnaces used in this mine for the purpose of assisting the ventilation. It is also troubled in some places with sand-bars cutting through the coal. The general character of the roof is soft soapstone slate, and in many places dangerous, requiring to be kept well timbered. On my visits to the mine, I found the mine well supplied with timber. The entries are driven narrow, on account of the tender nature of the roof, and many of the working places are wet, the roof not being strong enough to retain the water. I was told, while at the mine, that the cover from the coal to the service was composed of little else than loose sand and pebbles. The bottom or floor is composed of fire clay, uneven and rolling in places. The system of mining is the same as is generally adopted in the bituminous region. The mine has shipped over sixty thousand tons of coal during the year 1878.

Maple Grove Mine,

Located in Mineral township, Venango county, about one and a quarter mile from Reymilton station, on the L., S. and M. S. R. R. Mine owned and operated by S. P. McCalmont. There is only a small quantity of coal mined this year, and only a few men employed. There is a furnace used for ventilation, and a water-course driven to day light for drainage. Total coal shipped during the year, fifty-one hundred and fifty tons.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Stoneboro' Coal Mines,	Mercer Iron and Coal Company,	Bituminous,	Slope,		1	75
Pancoast Coal Mines,	Heims, Goodwill & Co.,	Bituminous,	Drift,			
Catfish Coal Mine,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,			
Washington Coal Mine,	F. Williams ——,	Bituminous,	Drift,			
Sligo Branch Mine,	Sligo Branch Coal Company,	Bituminous,	Drift,			
Rocky Bend Mine,	J. F. Moulton & Co.,	Bituminous,	Drift,	*		
Home Bank,	Buhl, Westerman & Co.,	Bituminous,	Shaft,	2	1	50
Mahoning Coal Works,	Mahoning Coal Company,	Bituminous,	Drift,			
Pacific Slope,	Dunham, Roberts & Co.,	Bituminous,	Slope,	3	1	40
Beaver Mines,	Lee & Patterson,	Bituminous,	Drift,			
Stewardson Furn. Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,			
Natrona Coal Mine,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	2	25
Etna Vesuvius Coal Mine,	Spang, Chalfant and Lewis Dalzell & Co.,	Bituminous,	Drift,			
Belleview Coal Mine,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Clinton Coal Mines,	Clinton Coal Company,	Bituminous,	Drift,			
Fairmount Coal Mines,	Fairmount Coal Company,	Bituminous,	Drift,			
Red Bank Furn. Mine,	Reynolds & Morehead,	Bituminous,	Drift,			
Diamond Coal Mine,	Diamond Coal Company,	Bituminous,	Drift,			
Jackson Centre Mine,	Jackson Centre Coal Company,	Bituminous,	Drift,	2		
Lower Hillville,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,			
Oakland, No. 2,	Pierce & Frampton,	Bituminous,	Shaft,	1	1	
Welsh Bank,	Wampum Coal Company,	Bituminous,	Drift,			
Mahoning Furnace Coal,	J. A. Colwell & Co.,	Bituminous,	Drift,			
Todd Mines,	G. P. Sauborn,	Bituminous,	Drift,	1		
Reimerton Coal Mine,	E. J. Bowen,	Bituminous,	Drift,			
Monteray Coal Works,	J. McCollum,	Bituminous,	Drift,			
Philadelphia Mine,	James Kennedy,	Bituminous,	Drift,			
Pine Creek Furn. Mine,	Brown & Mosgrove,	Bituminous,	Drift,			
Maple Grove Mine,	S. P. McCalmont,	Bituminous,	Drift,			
Bethel, No. 1,	E. A. Wheeler & Co.,	Bituminous,	Shaft,	1	1	30

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* Siphon pumps.

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of January, 1878.

										VENTILATION.							
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute in inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	140	28	33	201	7	. .	5,002	2	25	163	4,075	160	4,000	170	4,250	178	4,450
									30	185	4,162	180	4,050	190	5,100	185	5,550
. .	22	2	3	27	2	. .	990.12	2	42	105	4,410	102	4,284	105	4,410	Idle.	Idle.
. .	85	5	10	100	6	. .	3,125	4	7x5½	200	7,700	250	9,600	160	6,160	200	7,700
									4x4	50	800	60	960	50	800	50	800
									4x4	100	1,600	110	1,760	100	1,600	100	1,600
									7x6	100	4,620	150	6,300	100	4,620	100	4,620
. .	25	2	4	31	2	2	. . . .	. .	6x7	100	4,200	200	8,400	100	4,200	300	12,600
. .	19	. .	7	26	2	. .	318	2	36								
									36								
. .	48	1	13	62	3	2	3,000	4	8x10	100	8,000	100	8,000	100	8,000	100	8,000
5	80	30	23	133	7	. .	5,000	2	6x13	. . .	. . . .	160	12,480	. . .	. . . . .	190	14,820
									5½x9	. . .	. . . . .	. . .	. . . . .	230	11,385		
. .	30	5	16	51	3	2	853	2	9x6	60	3,240	90	4,860	90	4,860	59	3,186
2	39	12	19	70	3	4	1,869	3	7x6								
. .	93	12	25	130	11	5	3,959	2	5½x5½	250	7,562	620	18,755	500	15,125	350	10,587
. .	17	6	13	36	7	. .	1,700	3	24	158	3,792	158	3,792				
1	36	10	15	61	11	1	3,007	4									
. .	28	1	6	35	4	. .	. . . .	2	7½x6½	180	8,100	160	7,200	150	6,750	154	6,525
1	44	10	18	72	5	. .	2,654	3	33	150	7,950	135	7,165	155	8,215	145	7,379
									39	100	3,900	90	3,510	120	4,680	107	4,173
									2	800	1,600	840	1,680	700	1,400	650	1,300
. .	50	7	14	71	6	7	2,018	2	42	100	4,200	110	4,620	100	4,200	120	5,040
									30	110	3,300	120	3,600	110	3,300	130	3,900
. .	83	2	16	110	7	2	4,174	2	36	200	7,200	240	8,640	133	4,788	300	10,800
. .	36	20	27	80	7	3	2,167	2									
. .	20	3	. . .	23	3	. .	600	. .	50	100	5,000	100	5,000				
. .	25	8	5	38	2	2	800	. .	3½x5½								
									2¾x3								
. .	45	3	5	53	3	. .	1,300	. .	25	150	. . . .	186	. . . .	160	. . . .	300	
2	76	8	12	96	4	. .	3,722		29	200	5,800	. .	. . . . .	. . .	. . . . .	480	4,478
. .	54	. .	8	62	5	3	1,150	3	36								
. .	21	3	1	25	4	2	1,896										
. .	18	2	4	24	2	. .	375	4	36	300	10,800	300	10,800				
. .	17	1	2	20	1	1	493										
. .	21	4	6	31	1	1	. . . .	3	36								
. .	24	2	6	32	2	.	375	2									
. .	18	7	1	26	4	3	1,345	4									
. .	17	1	8	26	1	2	356	2									
1	80	22	15	117	6	2	2,160	4	3½x5								

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of heading.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Stoneboro' Coal Mines,	2	....	30	660	35	770	40	880	30	660
			112	1,008	105	945	110	990	112	1,008
Pancoast Coal Mines,	5	....	95	4,275	91	4,095	95	4,275	Idle.	Idle.
Catfish Coal Mine,	4	....	....	....	....	....	....	....	....	....
Washington Coal Mine,	....	....	80	2,560	131½	4,200	80	2,560	175	5,600
Sligo Branch Mine,	....	....	....	....	....	....	....	....	....	....
Rocky Bend Mine,	....	....	50	4,500	50	4,500	50	4,500	50	4,500
Home Bank,	2	....	....	....	140	5,390	....	....	160	6,160
							160	6,600	....	....
Mahoning Coal Works,	2	....	30	1,620	45	2,430	45	2,430	30	1,620
Pacific Slope,	4	....	....	....	....	....	....	....	....	....
Beaver Mines,	....	....	100	2,250	170	3,825	160	3,600	190	4,275
Stewardson Furnace Mine,	2	....	134	2,680	134	2,680	....	....	....	....
Natrona Coal Mine,	4	....	....	....	....	....	....	....	....	....
Etna Vesuvius Coal Mine,	....	....	55	3,035	50	1,825	44	1,602	30	1,260
			135	5,191	145	5,582	100	3,850	105	4,042
			145	5,075	130	4,550	117	4,095	195	4,025
Belleview Coal Mine,	5	....	150	7,950	135	7,155	155	8,215	143	7,579
Clinton Coal Mines,	....	....	180	3,240	200	3,600	220	3,960	210	3,780
			200	3,600	210	3,780	230	4,140	210	3,780
Fairmount Coal Mines,	....	....	100	2,500	120	3,000	100	2,500	350	8,750
Red Bank Furnace Mine,	....	....	....	....	....	....	....	....	....	....
Diamond Coal Mine,	....	....	80	4,000	90	4,500	100	5,000	77	3,850
Jackson Centre Mine,	7	....	....	....	....	....	....	....	....	....
Lower Hillville,	2	....	100	....	150	....	115	....	210	....
Oakland, No. 2,	7	....	235	2,820	....	....	....	....	320	3,440
Welsh Bank,	3	....	....	....	....	....	....	....	....	....
Mahoning Furnace Coal,	....	....	....	....	....	....	....	....	....	....
Todd Mines,	....	....	250	9,000	250	9,000	300	10,800	....	....
Reimerton Coal Mine,										
Monterey Coal Works,	....	....	....	....	....	....	....	....	....	....
Philadelphia Mine,										
Pine Creek Furnace Mine,	6									
Maple Grove Mine,	3									
Bethel, No. 1,										

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
21	22	23	24	25	26	27	28	29	30	31	
....	12	195	4,485	200	4,600	185	4,255	197	4,531	....	As reported by operator.
....	16	107	2,033	100	1,900	93	1,767	83	1,577		
....	68	64	4,352	63	4,284	64	4,352	Idle.	Idle.	....	As reported by operator.
....	5½x5	160	4,400	210	5,775	150	4,125	160	4,400	....	As reported by operator.
	5x6	75	2,250	100	3,000	75	2,250	75	2,250		
	4x4	150	2,400	160	2,560	150	2,400	150	2,400		
....	6x7	100	4,200	200	8,400	100	4,200	300	12,600	....	As reported by operator.
....	24	....	....	....	....	....	....	....	....	....	As reported by operator.
	19										
....	3x4	....	....	....	....	....	....	....	....	....	As reported by operator.
....	5x9	....	....	160	7,200	....	....	160	7,200	....	As reported by operator.
....	5x8	....	....	....	....	180	7,200				
....	5x5	75	1,875	100	2,500	100	2,500	73	1,825	....	As reported by operator.
	5x5	43	1,075	60	1,500	60	1,500	43	1,075		
....	5x6	....	....	....	....	....	....	....	....	....	As reported by operator.
....	3½x5	850	15,866	725	13,533	675	12,600	700	13,066	....	As reported by operator.
....	25	142	3,550	142	3,550	....	....	....	....	....	As reported by operator.
....	4	....	....	....	....	....	....	....	....	....	As reported by operator.
....	7x5½	290	11,165	295	11,357	335	12,897	300	11,550	....	As reported by operator.
....	57	272	15,504	240	13,690	269	15,333	247	14,079	....	As reported by operator.
....	30	400	12,000	350	10,500	420	12,600	480	14,400	....	As reported by operator.
....	25	125	3,125	145	3,625	136	3,400	400	10,000	....	As reported by operator.
....	....	....	....	....	....	....	....	....	....	....	As reported by operator.
....	50	96	4,800	100	5,000	92	4,600	90	4,500	....	As reported by operator.
....	4½x3½	....	....	....	....	....	....	....	....	....	As reported by operator.
....	36	110	....	140	....	110	....	500	....	....	As reported by operator.
....	13	400	5,200	....	....	....	....	480	4,205	....	As reported by operator.
....	....	....	....	....	....	....	....	....	....	....	As reported by operator.
....	....	....	....	....	....	....	....	....	....	....	As reported by operator.
....	36	500	18,000	500	18,000	....	....	....	....	....	As reported by operator.
....	36										

ACCIDENTS *in the Second Bituminous*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Joseph Zeigler, ...	24	Married, . .	. . . .	Jan. 5, 1878, .	. . . .
Christian Carrol, . . .	60	Married, . .	. . . .	Jan. 14, 1878, .	. . . .
Peter Rafter, ...	42	Married, . .	. . . .	Jan. 25, 1878, .	. . . .
Thomas Wardman, . .	26	Married, . .	1	Jan. 17, 1878, .	Of inquest by coroner, January 18, 1878. By investigation of Insp., Jan. 20, 1878.

District in month of January, 1878.

NATURE OF ACCIDENT.	REMARKS.
Non-Fatal Accidents.	
Run a pick through his foot, ...	In Pacific Slope Mine, Mercer county.
Leg hurt by a prop falling on it, . . .	In Belleview Mine, Allegheny county.
Leg broken above the ankle—caused by blast, ...	In Home Bank, Mercer county.
Fatal Accident.	
Killed by a fall of coal while at work,	In Beaver Mines, Lawrence county.

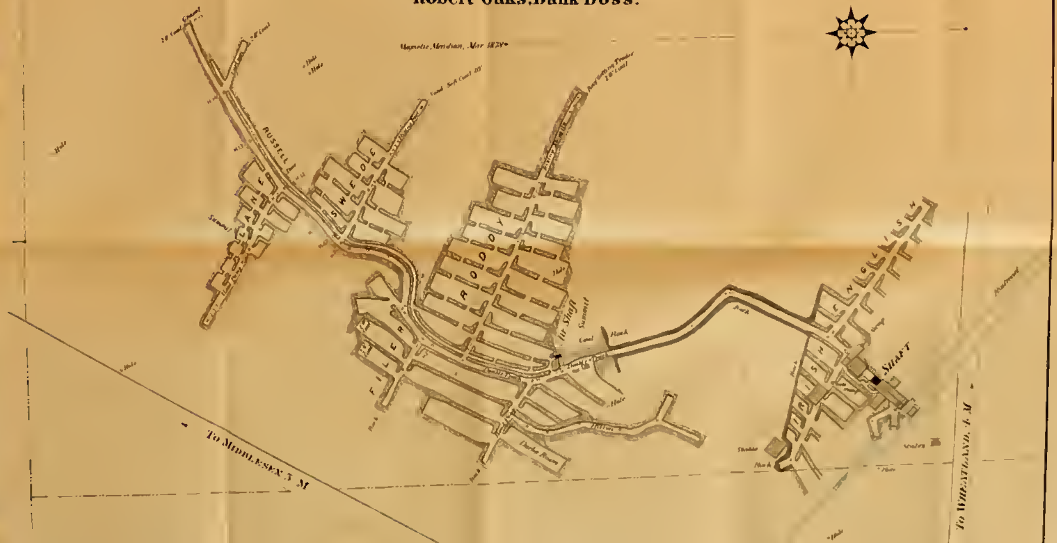
A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Mine,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Sligo Branch Mine,	Sligo Branch Coal Company,	Bituminous,	Drift,	. .	. .	. .
Etna and Vesuvius Mine,	Spang & Chalphant and Lewis Dalzell,	Bituminous,	Drift,	. .	. .	. .
Mahoning Coal Work,	Mahoning Coal Company,	Bituminous,	Drift,	. .	. .	. .
Stewardson Furn. Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Beaver Coal Mine,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .
Home Bank,	Bulil, Westerman & Co.,	Bituminous,	Shaft,	2	1	50
Monterey Coal Work,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Red Bank Furnace Coal,	Reynolds & Morehead,	Bituminous,	Drift,	1	1	8
Pancoast Coal Works,	Goodwill, Heims & F. Williams,	Bituminous,	Drift,	. .	. .	. .
Washington Coal Works,	Frank Williams,	Bituminous,	Drift,	. .	. .	. .
Fairmount Coal Works,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Philadelphia Coal Works,	James Kennedy,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 2,	Pierce & Frampton,	Bituminous,	Shaft,	1	1	. .
Maple Grove Coal Mine,	S. P. McCalmont,	Bituminous,	Drift,	. .	. .	. .
Clinton Coal Mine,	Clinton Coal Company,	Bituminous,	Drift,	. .	. .	. .
Natrona Coal Work,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	1	15
Catfish Coal Works,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville Works,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Mansfield Coal Mine,	J. F. Mansfield,	Cannel, B.,	Drift,	. .	. .	. .
Jackson Coal Mine,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pardoe Coal Mine,	M. M. and M. Coal Company,	Bituminous,	Drift,	. .	. .	. .
Barnes Coal Mine,	M. M. and M. Coal Company,	Bituminous,	Drift,	1	1	10
Bethel, No. 1,	Curtis & Boyce, and E. A. Wheeler	Bituminous,	Shaft,	1	1	30
Bethel, No. 2,	Curtis & Boyce, and E. A. Wheeler	Bituminous,	Shaft,	2	1	35
Pine Creek Furn. Mine,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Pacific Slope,	Dunham, Roberts & Co.,	Bituminous,	Slope,	3	1	40
Davidson Mines,	Davidson, Green & Co.,	Bituminous,	Drift,	. .	. .	. .
Karn City Coal Mine,	R. H. Fullerton,	Bituminous,	Drift,	. .	. .	. .
Mineral Ridge Work,	Mineral Ridge Coal Company,	Bituminous,	Drift,	. .	. .	. .

PIERCE, FRAMPTON & CO.,
MINE No. 1.
Hickory Township, Mercer Co., Pa.

To accompany the report of J T Davis
Mine Inspector Second District
Bituminous Coal Mines of Pa

Robert Oaks, Bank Boss.



*respective Collieries in the Second Bituminous Mine District of Pennsyl-
of February, 1878.*

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	43	9	20	72	5	. .	2,080	3	57	140	7,980	156	8,892	130	7,410	183	10,431
									3	800	2,400						
									39	85	3,315	145	5,645	124	4,836	135	5,265
. .	20	. .	7	27	2	. .	294	2									
. .	29	. .	9	38	4	1	1,599	2	48¾	140	6,825	160	7,800	125	6,093¾	100	4,875
. .	30	4	16	50	3	2	935	. .	54	60	3,240	59	3,186	53	2,862	60	3,240
. .	16	7	10	33	7	. .	1,500	3	24	200	4,800	190	4,560	140	3,360	225	5,400
. .	120	12	23	155	9	5	4,232	2	30¼	250	7,562	275	8,318	240	7,260	260	7,865
5	70	30	25	125	6	. .	4,500	2	49½	270	13,365	280	13,860	265	13,117½	270	13,365
. .	20	3	6	29	1	1	. .	3	36								
1	36	20	24	80	7	3	2,300	2	64½	105							
										110							
. .	20	3	4	27	2	. .	1,226	2	42	115	4,830	105	4,410	110	4,620	108	4,536
. .	22	3	3	28	2	2	1,308	2	42	200	8,400	155	6,510	160	6,720	90	7,780
. .	80	2	14	96	7	2	2,717	2	36	300	10,800	350	12,600	400	14,400	240	8,640
. .	17	4	7	28	2	. .	410	2									
2	90	10	12	112	5	.	3,000	2	9¾	330	3,217	325	3,168	600	5,550	350	3,237
. .	12	2	8	22	1	2	320										
. .	60	10	15	85	7	7	3,159	2	42	100	4,200	110	4,620	100	4,200	120	5,040
									24	120	2,880	130	3,120	120	2,880	140	3,360
1	33	10	16	59	12	1	6,750	4	36								
. .	75	15	15	105	5	. .	1,450	3	33	100	3,300	500	. . . .	325	. . . .	290	
									38½	110	4,235	215	. . . .	140	. . . .	165	
									16	140	2,210	210	. . . .	60	. . . .	100	
. .	45	3	8	56	3	. .	1,070	2	5x7½	150	. . . .	250	. . . .	190	. . . .	375	
. .	16	. .	2	18	1	1	1,000	2	56	. . .	. . . . .		. . . .	. . .	. .	100	5,600
. .	24	11	3	38	2	2	875	3	30¼	110	3,327	125	3,781	132	3,993	122	3,690
. .	120	20	40	180	6	3	1,154	2	36	250	10,080	290	10,440	Idle.	. .	Idle.	
2	75	20	26	121	4	2	2,740	7	36	200	7,200	210	7,560	210	7,560	200	7,200
1	61	9	21	91	5	2	1,121	4	15	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	210	3,150
3	25	6	8	39	2	. .	300	2	20	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	200	4,000
. .	20	4	. . .	24	4	3	1,440	4									
2	39	12	19	70	3	4	1,808	3	42								
. .	75	5	. . .	80	6	2	2,400	2	6x6¾	110							
									4x3½	140							
. .	10	2	. . .	12	1	. .	577	2	8x5								
. .	53	8	9	70	4	1	2,950	3	5x6	100	3,000	100	3,000	75	2,250	150	4,500
									5x6	100	3,000	75	2,250	75	2,250	100	3,000
									4x5	150	3,000	50	1,000	150	3,000	75	1,500

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

Name of Colliery.	Ventilation.									
			1st week.		2d week.		3d week.		4th week.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Mine, ...	3	. . . .	125	6,750	131	7,174	112	6,384	150	8,550
Sligo Branch Mine, ...	5	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . .
Etna and Vesuvius Mine, .	. . . .	. . . .	26	949	80	2,920	54	1,971	50	1,825
			100	4,235	130	5,197	130	5,205	80	3,080
			105	3,675	120	4,200	85	2,975	75	2,625
Mahoning Coal Work, . . .	. . . .	. . . .	30	1,620	30	1,620	28	1,512	30	1,620
Stewardson Furnace Mine,	1	. . . .	110	4,950	120	5,400	90	4,050	90	4,050
Beaver Coal Mine, ...	. . . .	. . . .	180	3,465	200	3.850	170	3,272	175	3,369
Home Bank, ...	2	. . . .	210	6,720	220	7,040	215	6,880	210	6,720
Monterey Coal Work, . .	1	. . .	. .	. . . .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .
Red Bank Furnace Coal.										
Pancoast Coal Works, . . .	. . . .	. . . .	95	4,275	85	3,825	90	4,050	88	3,960
Washington Coal Works, .	2	. . . .	200	6,400	155	4,960	160	5,720	90	2,880
Fairmount Coal Works, . .	. . .	. . .	150	3,750	176	4,375	200	5,000	200	5,000
Philadelphia Coal Works, .	3									
Oakland, No. 2, ...	5	. . . .	250	2,677	250	2,677	290	3,987	230	2,875
Maple Grove Coal Mine.										
Clinton Coal Mine, ...	. . . .	. . . .	200	2,800	200	2,800	220	3,080	200	2,800
			210	2,940	210	2,940	240	3,360	210	2,940
Natrona Coal Work, ...	3									
Catfish Coal Works, ...	3	. . . .	80	. . .	400	. . . .	280	. . .	210	. .
			100	. . . .	180	. . . .	100	. . . .	130	. . . .
			110	. . .	160	. . . .	50	. . . .	75	. . . .
Lower Hillville Works, . .	2	. . . .	110	. . . .	200	. . . .	150	. . . .	300	. . . .
Mansfield Coal Mine, ...	1	. . . .	. .	. . .	. . . .	. . . .	. . . .	. . .	100	4,900
Jackson Coal Mine, ...	3	. . . .	232	3,712	200	3,200	212	3,390	232	3,712
Pardoe Coal Mine, ...	5	. . . .	40	1,400	50	1,550	Idle.	. . . .	Idle.	. . . .
Barnes Coal Mine, ...	3	. . . .	30	. . . .	. . . .	. . . .	. . .	. . . .	. . . .	. . . .
Bethel, No. 1, ...	. . . .	. . . .	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	90	1,620
Bethel, No. 2, ...	. . . .	. . . .	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	90	. . . .
Pine Creek Furnace Mine,	4									
Pacific Slope, ...	4	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Davidson Mines, ...	6	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Karn City Coal Mines, . .	3	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . .	. . . .
Mineral Ridge Work, . . .	. . . .	. . . .	160	3,000	75	2,383	100	2,500	108	3,000

Mines reported "not running in February:" Welsh Bank, Wampum, Lawrence county; Todd Mine, Enon Valley, Lawrence county; Diamond, Reynoldsville, Jefferson county; Rockey Bend, Fuller Station, Jefferson county.

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per mile at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of current air per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	57	255	14,635	272	15,504	240	13,680	280	15,960	. . . .	As reported by operator.
. . . .	21										
	19										
. . . .	38½	290	11,165	362	13,927	275	10,587	330	12,705		
. . . .	25	75	1,875	73	1,825	70	1,750	75	1,875		
	25	43	1,075	43	1,075	40	1,000	43	1,075		
. . . .	20	175	3,500	160	3,200	168	3,360	300	6,000		
. . . .	18¼	800	14,800	850	15,725	840	15,540	780	14,430		
. . . .	45	190	8,550	200	9,000	210	9,450	200	9,000		
. . . .	36										
. . . .	76	64	4,864	58	4,408	61	4,636	60	4,560		
. . . .	42	200	8,400	155	6,510	160	6,720	90	7,780		
. . . .	25	200	5,000	175	4,375	200	5,000	200	5,000		
. . .	5′ 7′′ x 5′ 3′′	110	3,226	95	2,785	135	3,959	100	2,933		
. . . .	30	400	12,000	300	9,000	350	10,500	400	12,000		
. . . .	30	420	12,600	320	9,600	370	11,100	420	12,600		
. . . .	5x5¼	250	. . . .	60	. . . .	300	. . . .	250			
. . . .	4x4	120	. . . .	130	. . . .	175	. . . .	75			
. . . .	5x7½	150	. . . .	150	. . . .	100	. . . .	120			
. . . .	5x5½	200	. . . .	425	. . . .	250	. . . .	1.000			
. . . .	. . .		. . . .	. . .	. . . .	. . .		200	6,000		
. . . .	25	165	4,125	170	4,250	174	4,350	168	4,200		
. . . .	25	380	9,500	400	10,000	Idle.	. . . .	Idle.			
. . . .	20	200	4,000	200	4,000	200	4,000	180	3,600		
	15	200	3,000	200	3,000	200	3,000	180	2,700		
. . . .	25	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	150	3,750		
. . . .	15	Idle.	. . . .	Idle.	. . . .	Idle.	. . . .	210	3,150		
. . . .	30										
. . .	4′ 5′′ x 5′ 8′′	310									
. . . .	6x5										
. . . .	4x5	200	4,000	250	5,000	150	3,000	120	2,400		
	6x7	100	4,200	50	2,100	75	3,150	150	6,300		

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Coal Works, .	P. Y. Hite, ...	Bituminous,	Drift, ...	1	1	10
Natrona Coal Works, . .	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift, ...	1	1	25
Etna and Vesuvius, . . .	Spang, Chalfant and Lewis Dalzell & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Monterey Coal Works, .	J. McCollum, ...	Bituminous,	Drift, ...	. .	. .	. .
Catfish Coal Works, . . .	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	.	. .
Lower Hillville, ...	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	. .	. .
Mahoning Coal Works, .	Mahoning Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Stewardson Furnace, . .	F. B. & A. Laughlin, ...	Bituminous,	Drift, ...	. .	. .	. .
Fairmount Coal Works,	Fairmount Coal Company, ...	Bituminous,	Drift, ...	. .	. .	.
Red Bank Furnace, . . .	Reynolds & Moorehead, ...	Bituminous,	Drift, ...	1	8	8
Pine Creek Furnace, . .	Brown & Mosgrove, ...	Bituminous,	Drift, ...	. .	. .	. .
Pancoast Coal Works, .	Heim, Goodwell & F. Williams,	Bituminous,	Drift, ...	. .	. .	. .
Washington Coal Works,	F. Williams, ...	Bituminous,	Drift, ...	. .	. .	. .
Beaver Mines, ...	Lee & Patterson, ...	Bituminous,	Drift, ...	. .	. .	. .
Bethel, No. 1, ...	Wheeler, Curtis & Boyce, ...	Bituminous,	Shaft, . . .	1	1	30
Bethel, No. 2, ...	Wheeler, Curtis & Boyce, . . .	Bituminous,	Shaft, ...	2	1	35
Jackson Centre, ...	Jackson Centre Coal Company, .	Bituminous,	Drift, ...	. .	. .	. .
Karns City Coal Works,	R. H. Fulerton, ...	Bituminous,	Drift, ...	. .	. .	. .
Mansfield Coal Mine, . .	J. F. Mansfield, ...	Bituminous,	Drift, ...	. .	. .	. .
Stoneboro' Coal Works,	Mercer Iron and Coal Company,	Bituminous,	Slope, . . .	. .	1	75
Barnes Mine, ...	M. M. and M. Company, ...	Bituminous,	Drift, ...	. .	1	8
Pardoe Mine, ...	M. M. and M. Company, ...	Bituminous,	Drift, ...	. .	.	. .
Clinton Coal Works, . .	Clinton Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Sligo Branch, ...	Sligo Branch Coal Company, . .	Bituminous,	Drift, ...	. .	. .	. .
Oakland, No. 2, ...	Pierce & Frampton, ...	Bituminous,	Shaft, ...	1	1	. .
Mahoning Furn. C. M.,	J. A. Colwell & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Burnett Bank, ...	A. Burnett, ...	Bituminous,	Drift, ...	. .	. .	. .
Welsh Bank, ...	Wampum Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Philadelphia Mine, . . .	James Kennedy, ...	Bituminous,	Drift, ...	. .	. .	. .
Pacific Slope, ...	Dunham, Roberts & Co., ...	Bituminous,	Slope, ...	3	1	40
Home Bank, ...	Buhl, Westerman & Co., ...	Bituminous,	Shaft, ...	2	1	50

respective Collieries in the Second Bituminous Mine District of Pennsylva-
of March, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	VENTILATION. 1ST WEEK. Velocity of air current per minute at inlet.	VENTILATION. 1ST WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 2D WEEK. Velocity of air current per minute at inlet.	VENTILATION. 2D WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 3D WEEK. Velocity of air current per minute at inlet.	VENTILATION. 3D WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 4TH WEEK. Velocity of air current per minute at inlet.	VENTILATION. 4TH WEEK. Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	39	10	18	67	5	. .	2,100	3	52	166	8,632	128	6,656	135	7,020	157	8,164
									39	130	5,070	101	3,930	120	4,680	133	5,187
1	35	10	12	57	9	1	269	4									
. .	29	3	15	47	3	1	1,854	2	42	110	4,620	105	4,410	135	5,670	125	5,250
. .	25	3	6	34	1	1	. . . .	3	36								
. .	70	20	20	110	5	. .	2,096	3	38⅛	375	. . . .	250	. . . .	100	. . . .	100	
									38½	190	. . . .	160	. . . .	200	. . . .	60	
									27⅛	300	. . . .	60	. . . .	125	. . . .	160	
. .	43	3	8	54	3	. .	1,000	2	36	330	. . . .	160	. . . .	200	. . . .	290	
. .	30	5	16	41	3	2	1,351	2	54	53	2,862	59	3,186	55	2,970	65	3,510
. .	15	7	9	31	7	. .	1,226	. .	24	176	4,224	180	4,320	168	4,032	208	4,992
. .	81	2	12	95	9	1	4,096	3	36	200	7,200	300	10,800	240	8,640	210	8,640
1	42	26	10	78	8	3	3,031	3	34⅛	130	4,485	125	4,312	140	4,830	110	3,795
									31⅛	28	966	20	690	30	1,035	30	1,035
									16	19	304	20	320	25	400	40	640
. .	19	7	. . .	26	2	. .	1,440	4									
. .	19	4	4	27	2	. .	1,525	2	42	110	4,620	105	4,410	115	4,830	108	4,536
. .	22	4	4	30	2	2	1,658	2	42	155	6,510	184	7,728	130	4,460	180	7,560
. .	130	15	24	169	10	5	4,029	1	30¼	255	7,713	250	7,562	240	7,260	260	7,865
1	47	10	22	79	5	2	1,000	2	15	Idle.	Idle.	215	3,225	200	3,000	220	3,300
3	25	10	14	49	2	. .	1,000	2	20	210	4,200	209	4,180	Idle.	Idle.	Idle.	Idle.
. .	16	5	3	24	2	2	500	3	25	141	3,525	123	3,075	120	3,000	142	3,550
. .	8	2	1	11	1	. .	360	2	35								
. .	14	. .	2	16	1	1	900	3	56	90	5,040	95	5,320	95	5,320	80	4,480
1	170	35	30	235	8	. .	5,551	2	25	135	3,375	194	4,850	180	4,500	160	4,400
									30	84	2,520	77	2,310	80	2,400	72	2,160
1	65	12	30	107	4	2	2,750	7	36	200	7,200	200	7,200	180	6,480	180	6,480
									20	100	2,000	100	2,000	90	1,800	100	2,000
. .	95	15	30	140	5	3	2,187	2	30	260	7,800	280	8,400	280	8,400	250	7,500
. .	50	10	15	75	7	7	2,482	2	42	110	4,620	100	4,200	120	5,040	110	4,620
									30	130	3,900	120	3,600	142	4,200	130	3,900
. .	18	. .	7	25	2	. .	476	2	35								
									35								
2	95	10	7	12	5	. .	1,800	2	9	. . .	. . . . .	. . .	. . . . .	. .	. . . .	650	5,850
. .	21	3	4	28	4	1	1,884										
. .	75	12	10	97	2	.	3,000										
. .	90	6	20	116	5	4	3,600	4	36								
. .	14	7	3	24	2	. .	85										
2	26	16	18	60	3	4	2,171	3	. .	300	8,043	470	7,872	Boss	absent	460	8,280
5	50	15	10	75	5	. .	4,134	2	75	150	11,700	110	8,580	140	10,920	140	10,920

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Coal Works,	. . . .	. . . .	125	6,500	112	5,824	120	6,240	127	6,604
			133	7,280	85	4,420	95	5,320	100	5,600
Natrona Coal Works,	3									
Etna and Vesuvius,	5	. . . .	37	1,350	40	1,460	62	2,263	75	2,737
			93	3,580	80	3,080	90	3,465	95	3,657
			100	3,500	75	2,625	105	3,675	108	3,780
Monterey Coal Works,	. . . .	. . . .	. .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Catfish Coal Works,	3	. . . .	300	. . . .	210	. . . .	80	. . . .	80	. . . .
			150	. . . .	150	. . . .	180	. . . .	50	. . . .
			240	. . . .	50	. . . .	105	. . . .	140	. . . .
Lower Hillville,	. . . .	. . . .	300	. . . .	140	. . . .	180	. . . .	240	. . . .
Mahoning Coal Works,	. . . .	. . . .	28	1,572	30	1,620	27	1,458	32	1,728
Stewardson Furnace,	1	. . . .	44	1,980	88	3,960	64	2,880	88	3,960
Fairmount Coal Works,	6	. . . .	100	2,500	200	5,000	220	5,500	300	7,500
Red Bank Furnace,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Pine Creek Furnace,	7									
Pancoast Coal Works,	6	. . . .	90	4,050	85	3,825	95	4,275	88	3,960
Washington Coal Works,	5	. . . .	155	4,960	184	5,888	130	4,160	180	5,760
Beaver Mines,	. . . .	. . . .	175	3,365	165	3,176	160	3,080	180	3,465
Bethel, No. 1,	. . . .	. . . .	Idle.	Idle.	75	1,350	80	1,440	85	1,530
Bethel, No. 2,	. . . .	. . . .	112	1,680	110	1,650	Idle.	Idle.	Idle.	Idle.
Jackson Centre,	. . . .	. . . .	200	3,200	152	2,432	142	2,272	220	3,520
Karns City Coal Works,	4	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. .	. . . .
Mansfield Coal Mine,	1	. . . .	200	6,000	200	6,000	200	6,000	200	6,000
Stoneboro' Coal Works,	2	. . . .	105	1,680	123	1,968	153	2,448	110	1,760
			156	1,716	136	1,224	145	1,305	153	1,350
Barnes Mine,	3	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . .	. . . .
Pardoe Mine,	4	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Clinton Coal Works,	. . . .	. . . .	200	3,600	220	3,960	210	3,780	220	3,960
			180	2,160	200	2,400	190	2,280	200	2,400
Sligo Branch,	5	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Oakland, No. 2,	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	115	1,668
									680	2,040
Mahoning Furn. C. Mine.										
Burnett Bank.										
Welsh Bank,	3									
Philadelphia Mine,	3									
Pacific Slope,	4	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	90	3,300
Home Bank,	. . . .	. . . .	140	5,600	100	4,000	130	5,200	80	3,200

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	57	260	14,820	215	12,255	230	13,110	250	14,350		
. . . .	38½	280	10,780	260	10,010	280	10,780	275	10,587		
. . . .	36										
. . . .	16	100	. . . .	120	90	90	. . . .	110			
. . . .	27½	260	. . . .	120	75	75	. . . .	110			
. . . .	38½	110	. . .	100	160	160	. . . .	125			
. . . .	25	1,000	. . . .	360	. . . .	500	. . .	600			
. . . .	25	70	1,750	73	1,825	73	1,825	75	1,875		
	25	40	1,000	43	1,075	43	1,075	50	1,250		
. . . .	20	181	3,684	156	3,120	148	2,960	216	4,320		
. . .	25	125	3,125	225	5,625	240	6,000	300	7,500		
. . . .	25	28	700	30	750	31	725	35	875		
	27½	31	852	26	715	23	632	20	550		
	16	20	320	15	240	19	304	22	352		
. . . .	76	61	4,636	58	4,908	64	4,864	60	4,560		
. . . .	42	155	6,510	184	7,728	130	4,460	180	7,560		
. . . .	18½	815	15,262	800	14,800	750	13,875	850	15,725		
. . . .	25	Idle.	Idle.	160	4,000	130	3,250	147	3,675		
. . . .	25	217	3,255	212	3,180	Idle.	Idle.	Idle.	Idle.		
. . . .	25	143	3,575	141	3,521	122	3,050	143	3,575		
. . . .	30										
. . . .	30	205	6,150	205	6,150	195	5,850	190	5,700		
. . . .	12	132	3,288	176	4,224	150	3,600	155	3,720		
. . .	16	178	2,441	153	2,958	160	3,040	158	3,002		
. . . .	20	400	8,000	400	8,000	370	7,400	370	7,400		
	20	100	2,000	100	2,000	100	2,000	100	2,000		
. . . .	30	300	9,000	320	960	330	9,900	290	8,700		
. . . .	30	440	13,200	400	12,000	420	12,600	460	13,800		
. . . .	24										
	19										
. . . .	34	. . .	. . . .	. .	. . . .	. . .	. . . .	160	5,440		
. . . .	. . .	335	6,868	360	7,780	Boss	absent	370	7,326		
. . . .	40	160	6,400	140	5,600	140	5,600	150	6,000		

Accident Reported from Beaver Mine.

Ralph Welsh, married; accident occurred on 27th of February; by a fall of slate.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

Name of Colliery.	Name of Operator.	Character of coal—bituminous, or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines	Horse power.
1	2	3	4	5	6	7
Mahoning Coal Works, .	Mahoning Coal Company, ...	Bituminous,	Drift, ...	. .	. .	.
Pennsylvania Salt Manufacturing Co.'s Mines.	Pennsylvania Salt Manufacturing Company, ...	Bituminous,	Drift, ...	1	1	20
Etna and Vesuvius Coal Works, ...	Spang, Chalfant & Co., and Lewis, Dalzell & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Wise Shaft, ...	Snyder Coal Company, ...	Bituminous,	Shaft, ...	2	1	40
Stewartson Furnace Coal Mine, ...	F. B. & A. Laughlin, ...	Bituminous,	Drift, ...	. .	. .	. .
Bethel, No. 1, ...	E. A. Wheeler, Curtis & Boyce, .	Bituminous,	Shaft, ...	1	1	30
Oakland, No. 1, ...	Pierce & Scott, ...	Bituminous,	Shaft, ...	2	1	.
Oakland. No. 2, ...	Pierce & Frampton, ...	Bituminous,	Shaft, ...	2	1	. .
Mansfield's Coal Mine, .	J. F. Mansfield, ...	Bituminous,	Drift, ...	. .	. .	. .
Catfish Coal Works, . . .	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	. .	. .
Lower Hillville C'l W'ks,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	. .	. .
Mineral Ridge C'l W'ks,	T. J. Skidmore, ...	Bituminous,	Drift, ...	. .	. .	. .
Philadelphia Mine, . . .	James Kennedy, ...	Bituminous,	Shaft, ...	. .	. .	.
Fairmount Coal Works,	Fairmount Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Pancost Coal Mine, . . .	A. A. Heim, Goodwell & F. Williams, ...	Bituminous,	Drift, ...	. .	. .	. .
Washington Coal Works,	Frank Williams, ...	Bituminous.	Drift, ...	. .	. .	. .
Monterey Coal Mines, .	J. McCollum, ...	Bituminous,	Drift, ...	. .	.	. .
Stoneboro' Coal Works,	Mercer Iron and Coal Company,	Bituminous,	Slope, ...	. .	1	75
Diamond Coal Works, .	Heim & Goodwill, ...	Bituminous,	Drift, ...	. .	. .	. .
Jackson Center Coal Mine	Jackson Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Clinton Coal Works, .	Clinton Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Mahoning Furnace Coal Works, ...	J. A. Colwell & Co., ...	Bituminous,	Drift, ...	. .	. .	. .
Orangeville Shaft, ...	Morris Coal Company, ...	Bituminous,	Shaft, ...	1	2	45
Pacific Slope, ...	Dunham, Roberts & Co., ...	Bituminous.	Slope, ...	3	1	40
Barnes' Mines, ...	M. M. and M. Company, ...	Bituminous,	Drift, ...	1	1	8
Pardoe Mines, ...	M. M. and M. Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Pine Creek Furnace Colliery, ...	Brown & Mosgrove, ...	Bituminous,	Drift, ...	. .	. .	. .
Home Bank, ...	Buhl, Westerman & Co., ...	Bituminous,	Shaft, ...	1	1	50
Bellview Mines, ...	P. Y. Hite, ...	Bituminous,	Drift, ...	1	1	10

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of April, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
								Number of openings	Inlet—size of feet.	1ST WEEK.		2D WEEK.		3D WEEK		4TH WEEK.	
										Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	33	7	16	56	3	2	1,169	2	54	50	2,700	53	2,862	50	2,700	60	3,240
1	34	10	10	54	9	1	300	4	39								
. .	29	3	12	44	3	1	2,428	2	42	150	6,300	160	2,720	155	6,570	110	4,620
5	72	5	6	83	3	. .	4,000	2	38½	. . .	. . . . .	. .	. . . .	. .	. . .	230	8,855
. .	13	7	11	31	7	. .	1,183	2	24	184	4,416	192	4,608	152	3,610	188	4,512
1	39	7	20	66	3	2	1,026	3	30	60	1,800	60	1,800				
									30	90	2,700	130	3,900				
2	29	. .	3	32	1	. .	1,500	. .	18¼	650	11,710	. . .	. . .	450	8,109	600	10,950
2	88	10	7	105	5	. .	3,000	2	37	105	3,885	255	9,435	220	8,140	250	9,250
. .	20	. .	2	22	1	1	1,000	2	56	120	6,720	120	6,720	120	6,720	120	6,720
. .	85	15	10	110	5	. .	3,065	3	38½	250	. . . .	375	. . . .	330	. . . .	300	
									38½	200	. . . .	300	. . . .	430	. . .	500	
. .	58	4	8	70	3	.	1,620	2	35	150	. . . .	150	. . . .	150	. . . .	160	
. .	60	10	9	79	4	1	3,100	4	30	120	3,600	120	3,600	100	3,000	66	1,980
									30	200	6,000	150	4,500	100	3,000	200	6,000
									20	100	2,000	100	2,000	75	1,500	75	1,500
. .	15	5	5	25	2	.	612										
. .	83	2	3	86	8	3	5,197	14	36	255	9,180	223	8,028	250	9,000	200	7,200
									36	75	2,700	70	2,520	80	2,880	220	7,920
. .	19	4	6	29	2	. .	1,387	3	42	125	5,250	120	5,040	108	4,536	120	5,040
. .	22	2	5	29	2	2	1,707	2	42	180	7,560	184	7,728	130	5,460	155	6,510
. .	18	1	4	23	2	. .	610	2	36								
1	170	30	30	230	8	. .	3,548	2	25	180	4,500	191	4,850	170	4,250	180	4,500
									30	82	2,460	77	2,310	78	2,340	70	2,100
. .	35	.	3	38	3	. .	3,000										
. .	18	4	3	25	2	2	600	3	30¼	142	3,905	144	3,960	142	3,905	145	3,987
. .	45	10	14	69	7	7	2,035	1	42	100	4,200	110	4,620	90	3,780	100	4,200
									30	. . .	3,000	. . .	3,300	. . .	2,700	. . .	3,000
. .	15	4	1	20	3	1	1,636										
2	34	11	6	51	2	4	1,430	2	38½	78	3,003						
2	28	16	18	62	3	4	2,146	3	42	. . .	8,226	. . .	8,043	. . .	8,540	. . .	8,469
. .	78	10	21	109	4	2	2,665	3	30								
									20								
. .	67	10	30	107	5	2	2,137	2	30	300	9,000	400	12,000	380	11,400	380	11,400
. .	19	7	. . .	26	4	3	1,346	4									
5	45	13	7	65	4	. .	3,500	2	78	125	9,750	95	7,410	150	11,700	180	14,040
1	44	8	19	71	5	. .	3,104	2	52	170	8,840	160	8,320	152	7,904	173	8,996
									39	150	5,850	135	5,265	128	4,992	147	5,733

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Mahoning Coal Works, . .	. . .	. . . .	25	1,350	28	1,512	25	1,350	30	1,620
Pennsylvania Salt Manufacturing Company's Mines.	3	. . . .	. . . . .	. .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . .
Etna and Vesuvius Coal Works, ...	5	. . . .	77	2,810	80	2,920	76	2,774	67	2,445
			110	4,235	98	3,773	85	3,272	85	3,272
			125	4,375	110	3,850	100	3,500	90	3,150
Wise Shaft, ...	2	. . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . .	230	6,037
Stewartson Furnace Coal Mine, ...	1	. . .	100	4,500	136	6,120	80	3,600	92	4,140
Bethel, No. 1, ...	. . . .	. . . .	. . . .	. . . .	60	1,440	. . . . .	. . . . .	. .	. . . .
Oakland, No. 1, ...	1	. . . .	. . .	. . . . .	. . .	. . . . .	. . .	. . . . .	. . .	. . .
Oakland, No. 2, ...	6	. . . .	165	2,329	405	5,962	205	3,075	403	5,932
Mansfield's Coal Mine, . . .	1	. . .	1,100	6,600	1,100	6,600	1,100	6,600	110	6,600
Catfish Coal Works, . . .	. . . .	. . .	210	. . . .	350	. . . .	300	. . . .	270	. . . .
			190	. . . .	270	. . . .	400	. . . .	550	. . .
Lower Hillville Coal Works	1	. . . .	140	. . . .	140	. . .	140	. . .	150	. . . .
Mineral Ridge Coal Works,	. . . .	. . . .	140	3,888	125	3,388	92	2,500	104	3,160
Philadelphia Mine, ...	2	. . . .	. . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . .
Fairmount Coal Works, .	7	. . . .	232	5,800	210	5,050	230	5,750	220	5,500
			300	7,500	285	7,125	295	7,375	100	2,500
			145	3,625	141	3,525	141	3,525	133	3,325
Pancost Coal Mine, ...	5	. . . .	106	5,220	112	5,040	101	4,545	112	5,040
Washington Coal Works, .	5	. . . .	90	2,880	155	4,960	160	5,120	200	6,400
Monterey Coal Mines, . . .	. . . .	. . . .	. . . .	. . . . .	. . . .	. . . . .	. . . . .	. . . . .	. . . .	. . . .
Stoneboro' Coal Works, . .	2	. . . .	160	1,440	146	1,314	170	1,530	160	1,440
			160	2,260	130	2,080	140	2,240	150	2,400
Diamond Coal Works, . . .	. . . .	. . . .	. . . .	. . .	. .	. .	. . . . .	. . . . .	. . .	.
Jackson Center Coal Mine,	2	. . . .	175	2,800	170	2,720	180	2,880	185	2,960
Clinton Coal Works, ...	. . . .	. . . .	110	1,320	120	1,440	100	1,200	110	1,320
				1,980	. . .	2,160	. . . .	1,800	. . . .	1,980
Mahoning Furn. Coal Works	. . . .	. . . .	. . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . .	. . .
Orangeville Shaft, ...	2	. . . .	45	1,800	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . .
			30	1,200						
Pacific Slope, ...	4	. . . .	90	3,300	80	2,880	120	4,400	100	3,500
Barnes' Mines, ...	. . . .	. . . .	. . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . . .	. . . .
Pardoe Mines, ...	3	. . . .	100	3,000	70	2,100	70	2,100	60	1,800
Pine Creek Furn. Colliery,	6	. . .	. . . .	. . . . .	.	.	. . . .	. . . . .	. . . . .	. . . .
Home Bank, ...	. . . .	. . . .	115	4,600	100	4,000	140	5,600	200	8,000
Bellview Mines, ...	2	. . . .	170	8,840	149	7,748	137	7,124	146	7,592
			180	10,260	172	9,804	165	9,405	184	10,488

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION
		1ST WEEK.		2D WEEK		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	25	60	1,500	70	1,750	60	1,500	75	1,875	. . . .	Clarion county.
	25	40	1,000	40	1,000	40	1,000	43	1,075		
. . . .	42	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	Allegheny county.
. . . .	38¼	305	11,742	295	11,357	290	11,165	280	10,780	. . . .	Allegheny county.
. . . .	38⅛	. . .	. . ✓.	. . .	. . . .	. . .	. . . .	231	8,893	. . . .	Mercer county.
. . . .	20	150	3,000	200	4,000	136	2,720	180	3,600	. . . .	Armstrong county.
. . . .	25	120	3,000	120	3,000	. .	. .	. . .	. . . .	. . . .	Mercer county.
. . . .	25	450	11,250		. . .	310	7,750	400	10,000	. . . .	Mercer county.
. . . .	29¾	300	6,775	295	8,631	290	8,485	293	8,572	. . .	Mercer county.
. . . .	30	200	6,000	200	6,000	200	6,000	200	6,000	. . . .	Beaver county.
. . .	38⅛	210	290	290	. . .	300	. . . .	290	. . . .	. . .	Clarion county.
. . . .	27¼	200	425	425	. . . .	600	. . . .	325			
. . . .	25	300	. . .	375	.	375	. . .	500	. . . .	. . . .	Clarion county.
. . .	42	136	6,972	150	6,300	200	8,400	75	3,150	. . .	Clarion county.
	20	150	3,000	200	4,000	75	1,500	300	6,000		
. . .	. . .	. . .	. . . .	. . .	. . .		. . .	. .	. . . .	. . . .	Venango county.
. . .	25	200	5,000	190	4,750	195	4,875	90	2,250	. . .	Clarion county.
. . . .	25	133	3,325	128	3,700	129	3,225	110	2,750		
. . . .	25	100	2,500	89	2,225	195	2,375	300	7,500		
. . . .	42	125	5,250	120	5,040	108	4,536	120	5,040	. . .	Jefferson county.
. . . .	42	190	7,980	155	6,510	130	5,460	200	8,400	. . . .	Jefferson county.
. . . .	9	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Clarion county.
. . . .	24	160	3,840	176	4,224	160	4,240	170	4,080	. . . .	Mercer county.
. . . .	19	150	2,850	150	2,850	154	2,926	145	2,760		
. . . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. .	. . . .	. . . .	Jefferson county.
. . . .	25	150	3,800	150	3,750	155	3,875	158	3,950	. .	Mercer county.
. . . .	30	350	10,500	380	11,400	340	10,200	400	12,000	. . .	Lawrence county.
. . . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. .	. . .	. . .	Armstrong county.
. . . .	20	150	3,000	. . .	. . . .	. .	. . . .	. . .	. . . .	.	Mercer county.
. . . .	30	. . .	5,525	. . .	4,958	. . .	5,383	. .	5,100	. . . .	Mercer county.
. . . .	30	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Butler county.
	20 25 30	400	12,000	450	13,500	430	12,900	400	12,000	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. .	. . .	. .	. .	. .	.	. . . .	Armstrong county.
. . . .	40	150	6,000	130	5,200	160	6,400	230	9,200	. . .	Mercer county.
. . . .	57	257	14,649	252	14,364	232	13,234	263	11,991	. . . .	Allegheny county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Coal Works,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Etna and Vesuvius Mines	Spang, Chalfant and Lewis Dalzell & Co.,	Bituminous,	Drift,	. .	. .	. .
Natrona Mines,	Penn'a Salt and Manuf'g Co.,	Bituminous,	Drift,	1	1	20
Catfish Coal Mines,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville Mines,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	.
Wise Shaft,	Snyder Coal Company,	Bituminous,	Shaft,	2	1	40
Pacific Slope,	Dunham, Roberts & Co.,	Bituminous,	Slope,	3	1	40
Philadelphia Mine,*	James Kennedy,	Bituminous,	Drift.			
Stewardson Furn. Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Burnett Coal Mine,	A. Burnett,	Bituminous,	Drift,	. .	. .	. .
Pancoast Coal Mine,	Heims, Goodwill & Williams,	Bituminous,	Drift,	. .	. .	. .
Washington Coal Mine,	F. Williams,	Bituminous,	Drift,	. .	. .	. .
Clinton Coal Mine,	Clinton Coal Company,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 1,†	Pierce & Scott,	Bituminous,	Shaft.			
Oakland, No. 2,	Pierce & Frampton,	Bituminous,	Shaft,	2	1	. .
Diamond Coal Mine,	Heim & Goodwill,	Bituminous,	Drift,	. .	. .	. .
Beaver Coal Mine,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	
Cannelton Mines,‡	J. F. Mansfield,	Bituminous,	Drift.			
Orangeville Shaft,§	Morris Coal Company,	Bituminous,	Shaft,	1	2	20 25
Jackson Coal Mines,	Jackson Coal Company,	Bituminous,	Drift,	.	. .	.
Stoneboro' Coal Mines,	Mercer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Fairmount Coal Mines,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Home Bank,	Buhl, Westerman & Co.,	Bituminous,	Shaft,	1	1	50
Barnes Coal Mines,	M. M. and M. Company,	Bituminous,	Drift,	1	1	10
Pardoe Coal Mines,	M. M. and M. Company,	Bituminous,	Drift,	. .	. .	. .
Mineral Ridge Mines,	Mineral Ridge Coal Company,	Bituminous,	Drift,	. .	. .	. .
Mahoning Mines,‖	Mahoning Coal Company,	Bituminous,	Drift.			
Bethel Shaft, No. 1,	Curtis, Boyce & E. A. Wheeler,	Bituminous,	Shaft,	1	1	30
Bethel Shaft, No. 2,¶	Curtis, Boyce & E. A. Wheeler,	Bituminous,	Shaft.			
Hickory Mine,	Spearman & Co.,	Bituminous,	Shaft,	3	1	20

* Not working over ten men during month.
† Not reported—shaft about finished.
‡ Mines not running this month.
§ One half of the men in this shaft work in the night and the other half in the day.
‖ Works stopped.
¶ Not running in May.

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of May, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION. Number of openings.	VENTILATION. Inlet—size of—feet.	VENTILATION. 1ST WEEK. Velocity of air current per minute at inlet.	VENTILATION. 1ST WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 2D WEEK. Velocity of air current per minute at inlet.	VENTILATION. 2D WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 3D WEEK. Velocity of air current per minute at inlet.	VENTILATION. 3D WEEK. Number of cubic feet passing in per minute at inlet.	VENTILATION. 4TH WEEK. Velocity of air current per minute at inlet.	VENTILATION. 4TH WEEK. Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	43	8	12	63	5	. .	2,700	3	52	97	5,044	93	4,836	. . .	5,934	. . .	5,888
									39	186	7,254	175	6,825	. . .	4,509	. . .	6,021
. .	29	2	7	48	4	1	2,297	2	42	130	5,460	105	4,410	150	6,300	160	6,720
1	30	6	10	46	9	1	7,200	2									
. .	75	15	10	100	5	. .	2,656	2	38¼	250	9,625	150	5,775	300	11,550	375	15,437
									38¼	150	5,775	200	7,700	250	9,625	500	19,250
. .	28	2	2	32	2	. .	1,000	3	36¾	230	. . . .	250	. . . .	165	. . . .	140	
5	70	5	6	81	3	.	3,000	2	38¼	. . .	. . . .	. . .	. . . .	. . .	. . .	230	8,855
2	28	16	19	63	3	4	2,010	3	. .	350	8,529	365	8,895	330	8,043	500	12,186
. .	13	7	10	30	7	. .	1,641	3	24	164	3,936	140	3,360	216	5,181	140	3,360
. .	60	7	5	72	2	1	2,000	2	42	94	3,948	96	4,032	90	3,780	91	3,822
. .	19	4	5	28	2		1,817	3	42	115	4,830	105	4,410	110	4,620	108	4,536
. .	19	1	7	27	2	2	1,531	2	42	184	7,728	155	8,516	180	7,560	130	4,460
. .	50	7	14	71	6	7	1,424	2	42	120	3,040	110	4,620	110	4,620	120	5,040
									30	120	3,600	130	3,900	110	3,300	130	3,900
2	90	11	6	107	5	. .	3,500	2	6¾x5¾	170	6,597	250	9,702	245	9,508	210	9,314
. .	30	. . .	4	31	3		1,200	3	30								
. .	85	10	23	118	8	5	3,449	2	33	160	5,280	180	5,940	180	5,940	200	6,600
2	44	16	18	78	2	4	1,676	2	38¼	. . .	. . . .	80	3,040	95	3,610	106	3,710
. .	18	4	3	25	1	2	700	3	27½	242	6,655	245	6,737	220	6,050	230	6,325
1	145	28	28	201	8	. .	4,535	2	25	180	4,500	191	4,550	170	4,250	198	4,950
									30	80	2,400	76	2,280	84	2,520	87	2,660
. .	70	2	10	82	8	1	4,023	7	36	200	7,200	50	1,800	100	3,650	50	1,800
									36	133	4,788	133	4,788	110	3,960	150	5,400
									36	240	8,640	220	7,920	210	7,560	300	10,800
5	56	15	10	81	4	. .	3,600	2	6x13	140	10,920	170	13,260	105	8,190		
									5½x7	. . .	. . . .	. . .	. . . .	. . .	. . . .	250	9,625
1	72	10	28	110	4	2	3,140	10	36	200	7,200	200	7,200	200	7,200	200	7,200
. .	99	8	30	137	6	3	2,504	2	30	260	7,800	300	9,000	320	9,600	300	9,000
. .	75	15	13	103	5	1	3,642	3	30	100	3,000	150	4,500	120	3,600	150	4,500
									30	75	2,250	120	3,600	100	3,000	75	2,250
									20	75	1,500	200	4,000	100	2,000	200	4,000
1	51	7	17	75	4	2	1,400	2	30	120	3,600	100	3,000	90	2,700	110	3,300
									20	200	4,000	190	3,800	210	4,200	180	3,600
3	35	8	13	56	3	. .	1,300										

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Coal Works, . . .	2	....	88	4,576	72	3,744	....	4,700	...	5,657
			180	10,440	168	9,570	....	5,916	....	5,723
Etna and Vesuvius Mines, .	3	....	60	2,290	55	2,007	80	2,920	93	3,394
			95	3,657	80	3,080	125	2,812	110	4,235
			97	3,395	85	2,975	160	5,600	115	4.025
Natrona Mines.	....	....	....	....	....	....	....	....	....	....
Catfish Coal Mines, ...	2	....	200	7,700	130	5,005	250	9,625	325	12,572
			120	4,620	170	6,375	200	7,700	400	15,400
Lower Hillville Mines, . . .	1	....	200	....	220	....	150	....	120	....
Wise Shaft, ...	2	....	....		....	....	....	....	230	6,037
Pacific Slope.	4	....	100	3,500	90	3,150	85	2,975	75	2,625
Philadelphia Mine,* . .	....	....	....	....	....	....	....	....	....	....
Stewardson Furnace Mine,	1	....	96	4,320	75	3,375	80	3,600	96	4,320
Burnett Coal Mine.	....	....	....	....	....	....	....	....	....	....
Pancoast Coal Mine, . .	4	....	95	4,275	85	3,825	90	4,050	88	3,960
Washington Coal Mine, . .	5	....	155	4,960	200	6,400	90	2,880	160	5,120
Clinton Coal Mine, . . .	....	....	130	3,120	140	3,360	130	3,120	140	3,360
			130	2,730	150	3,150	130	2,730	140	2,440
Oakland, No. 1,†	....	....	....	....	....	....	....	....	....	....
Oakland, No. 2.	6	....	250	3,750	365	5,475	360	5,400	355	5,325
				1,936	400	3,552	350	3,106	340	3,144
Diamond Coal Mine, ...	3	....	....	....	....	....	....	....	....	....
Beaver Coal Mine, ...	....	....	....	....	....	....	....	....	....	....
Canuelton Mines,‡	....	....	....	....	....	....	....	....	....	....
Orangeville Shaft,§	2	....	....	....	90	1,350	68	1,564	70	1,750
					70	1,120	70	1,470	80	1,600
Jackson Coal Mines, ...	2	....	275	4,400	277	4,432	235	3,340	240	3,840
Stoneboro' Coal Mines, . .	2	....	160	2,560	160	2,560	175	2.900	192	3,072
			170	1,530	169	2,850	164	1,968	170	2,040
Fairmount Coal Mines, . .	7	....	90	2,250	90	2,250	90	2,250	75	1,775
			120	3,000	110	2,750	120	3,000	190	4,750
			400	10,000	300	7,500	350	8,750	400	10,000
Home Bank, ...	....	....	180	7,200	200	8,000	130	5,200	200	8,000
Barnes Coal Mines, ...	....	....	....	....	....	....	....	....	....	....
Pardoe Coal Mines, ...	3	....	....	....	....	....	....	....	....	....
Mineral Ridge Mines, . . .	3	....	83	2,250	157	4,032	107	2,866	141	3,583
Mahoning Mines,‖	....	....	....	....	....	....	....	....	....	....
Bethel Shaft, No. 1, ...	....	....	....	....	....	....	....	....	....	....
Bethel Shaft, No. 2,¶ . . .	....	....	....	....	....	....	....	....	....	....
Hickory Mine.	....	....	....	....	....	....	....	....	....	....

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* Not working over ten men during month.

† Not reported—shaft about finished.

‡ Mines not running this month.

§ One half of the men in this shaft work in the night and the other half in the day.

‖ Works stopped.

¶ Not running in May.

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
....	57	240	13,680	212	12,084	...	11,210	..	12,095	...	Allegheny county.
....	38¼	297	11,434	285	10,972	310	11,935	288	11,088	...	Allegheny county.
....	...	...	....	...	....	...	....	.	....	...	Allegheny county.
....	38½	150	5,775	100	3,850	150	5,775	250	9,625	....	Clarion county.
....	38½	120	4,620	100	3,850	200	7,700	300	11,550		
....	26⅔	750	....	1,000	....	375	....	225	...	....	Clarion county.
....	38⅓	..	....	..	.	..	..	231	8,893	....	Mercer county.
....	...	340	7,225	330	7,012	340	7,225	340	7,225	...	Mercer county.
....	...	...	....	...	...	...	...	...	....	..	Venango county.
....	20	172	3,440	152	3,040	228	4,560	160	3,200	....	Armstrong county.
....	47	70	3,290	75	3,525	72	3,384	71	3,337	....	Butler county.
...	76	64	4,864	58	4,408	61	4,636	60	4,560	....	Jefferson county.
....	32	155	4,960	200	6,400	90	2,880	160	5,120	....	Jefferson county.
....	30	400	12,000	380	11,400	420	12,600	400	12,000	....	Lawrence county.
....	...	...	....	...	....	...	....	...	....	....	Mercer county.
....	5¾ x 5¼	200	6,324	300	9,487	290	9,169	280	8,853	....	Mercer county.
....	...	...	....	...	....	...	....	...	....	....	Jefferson county.
...	3′ 8′′ x 5′ 1′′	780	14,430	800	14,800	800	14,800	830	15,550	....	Lawrence county.
....	...	...	....	...	....	...	....	...	....	....	Beaver county.
....	16	...	....	156	2,496	170	2,720	178	2,840	....	Mercer county.
....	25	270	6,750	265	6,625	230	5,750	233	5,825	....	Mercer county.
....	24	170	4,080	174	4,176	165	3,960	170	4,080	....	Mercer county.
....	19	160	3,040	150	2,850	178	2,441	185	3,514		
....	25	90	2,250	90	2,250	90	2,250	75	1,775	....	Clarion county.
....	25	120	3,000	110	2,750	120	3,000	190	4,750		
....	25	400	10,000	300	7,500	350	8,750	400	10,000		
....	5x8	200	8,000	225	9,000	145	5,800	225	9,000	....	Mercer county.
....	30	200	6,000	...	....	...	....	200	6,000	...	Butler county.
....	30	330	9,900	340	10,200	340	10,200	320	9,600	....	Mercer county.
....	42	100	4,200	200	8,400	150	6,300	120	5,040	....	Clarion county.
	20	200	4,000	300	6,000	200	4,000	300	6,000		
....	...	...	....	...	....	...	....	...	....	....	Armstrong county.
....	25	200	5,000	190	4,750	210	5,450	190	4,750	....	Mercer county.
....	...	...	....	...	....	...	....	...	....	....	Mercer county.
....	...	...	....	...	....	...	....	...	....	....	Mercer county.

LIST OF ACCIDENTS *occurring in the Mines of the Second*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
D. Woffington, ...	23	Married, . .	. . . .	May 3, . . .	. . . .
Andrew Swenson, . .	23	Single, . .	. . . .	May 7, . . .	. . . .
William Miles, ...	35	Widower, .	1	May 29, . . .	. . . .
Robert Beveridge, . .	45	Married, . .	. . . .	May 31, . . .	. . . .

Bituminous Coal District of Pennsylvania in May, 1878.

NATURE OF ACCIDENT.	REMARKS.
Face burned by explosion of squib; absent from work a few days only,	Natrona Coal Mine, Allegheny county.
Leg fractured by a fall of roof in room,	Pardoe Coal Mine. Mercer county.
Killed by a fall of rock in entry; was loosened by shot in blasting, ...	Barnes Coal Mine, Butler county.
Squeezed by a loaded car, ...	Hickory Shaft Mine, Mercer county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Mines,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Etna and Vesuvius Mines	Spang, Chalfant & Co. and Lewis Dalzell & Co.,	Bituminous,	Drift,	. .	. .	. .
Fairmount Mines,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	.
Orangeville Shaft,	Morris Coal Company,	Bituminous,	Shaft,	2	2	20 25
Home Bank,	Buhl, Westerman & Co.,	Bituminous,	Shaft,	1	1	50
Washington Mines,	Frank Williams.	Bituminous,	Drift,	. .	.	. .
Pancoast Mines,	Goodwill, Heim & F. Williams,	Bituminous,	Drift,	.	.	. .
Bethel, No. 1,	Curtis, Boyce & E. A. Wheeler,	Bituminous,	Shaft,	1	1	30
Jackson Mines,	Jackson Coal Company,	Bituminous.	Drift,	. .	. .	. .
Stoneboro' Mines,	Mercer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Red Bank Mines,	Reynolds & Morehead,	Bituminous,	Drift,	. .	. .	. .
Monterey Mines,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Pardoe Mines,	M. M. and M. Company,	Bituminous,	Drift,	1	. .	
Barnes Mines,	M. M. and M. Company,	Bituminous,	Drift,	1	1	10
Natrona Mines,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	1	30
Wise Shaft,	Snyder Coal Company,	Bitu. Block,	Shaft,	2	1	40
Catfish Mines,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	.	. .
Pine Creek Furn. Mine,	Brown and Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 2,	Pierce & Frampton,	Bitu. Block,	Shaft,	2	1	12x20
Diamond Mines,	Heim & Goodwill,	Bituminous,	Drift,	. .		
Hickory Coal Mine,	Spearman & Co.,	Bitu. Block,	Shaft,	3	1	20
Stewardson Furnace,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Mahoning Furnace,	J. A. Colwell,	Bituminous,	Drift,	. .	. .	. .
Pacific Slope,*	Dunham, Roberts & Co.,	Bitu. Block,	Slope.			
Clinton Coal Mine,†	Clinton Coal Company,	Bituminous,	Drift.			
Cannelton Coal Mine,†	J. F. Mansfield,	Bit. Cannel,	Drift.			
Beaver Coal Mine,†	Lee & Patterson,	Bituminous,	Drift.			
Cranberry Coal Mine,†	James Kennedy,	Bituminous,	Drift.			
Mahoning Coal Mine,‡	Mahoning Coal Company,	Bituminous,	Drift.			
Rimerton Coal Mine,‡	E. J. Bowan.					

* Not working during month.
† No report for month of June.
‡ Mines suspended operation for the present.

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of June, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	40	5	9	54	6	. .	1,280	2	46	126	5,796	156	7,176	88	4,045	123	5,128
									27	137	3,692	150	4,050	166	4,482	187	5,049
. .	27	2	17	48	3	1	1,439	2	42	165	6,930	156	6,552	. . .	. . .	166	6,972
. .	69	2	16	87	9	1	4,929	7	36	100	3,600	120	4,320	100	3,600	100	3,600
									36	125	4,500	125	4,500	75	2,700	80	2,880
									36	112	4,032	90	3,240	220	7,920	210	7,560
2	46	16	18	80	2	4	1,576	2	16	210	3,360	205	3,280	203	3,248	200	3,200
5	70	15	9	94	4	.	3,950	2	38	230	8,855	210	8,085	250	9,625	220	8,470
. .	21	2	6	29	2	2	545.7	2	42	155	6,510	184	7,728	130	4,460	180	7,560
. .	17	4	6	27	2	. .	644.7	2	42	105	4,110	115	4,830	108	4,536	110	4,620
1	47	7	16	70	4	2	1,354	2	20	200	4,000	150	3,000	150	3,000	160	3,200
									20	100	2,000	110	2,200	100	2,600	100	2,000
. .	40	8	4	52	3	2	1,373	3	5′ 2″ x 5′ 8″	245	7,173	210	7,026	250	7,312	250	7,312
1	120	24	24	168	8	. .	3,416	3		90	2,070	95	2,180	105	2,415	67	1,541
									28	300	1,700	310	1,760	425	2,408	400	2,266
									25	190	4,750	198	4,950	121	3,075	330	8,250
. .	20	16	19	55	5	2	442	3	34	56	1,910	114	3,876	48	1,632	97	3,298
									34	65	2,210	89	3,026	55	1,870	67	2,278
									16	32	512	100	1,600	109	1,744	54	864
. .	12	. .	4	16	1	1	500	2	5½ x 5½								
. .	67	9	24	100	6	2	2,850	2	30	380	11,400	390	11,700	400	12,000	410	12,300
1	66	10	16	92	4	2	3,192	8	36	260	8,760	260	8,760	240	8,640	220	7,920
									20	100	2,000	100	2,000	80	1,600	80	1,600
1	34	10	10	54	9	1	*7,000	2	6¼x6	60	2,340	30	1,470	64	2,496	53	2,067
5	72	5	6	83	3	. .	2,800	2	7x5½	. . .	. . . . .	. . .	.	. . .	. .	210	8,015
. .	60	10	7	77	4	. .	2,340	2	38½	200	7,700	200	7,700	225	8,662	275	10,587
									38½	250	9,625	250	9,625	300	11,550	125	5,812
. .	30	. .	2	32	2	. .	845	. .	45	160	7,200	150	6,750	140	6,300	160	7,200
. .	17	7	. . . .	24	4	3	*36,000	4									
2	85	13	6	111	5	. .	2,814	2	6¾x5¾	200	7,790	250	9,703	225	8,733	240	9,314
			7														
. .	30	2	3	35	3	.	3,000	4	7x7	150	7,350	145	7,105	148	7,252	145	7,105
3	20	5	8	33	2	. .	900	2	5x8 & 8x13	. .	5,200	. . .	5,350	. . .	5,200	. . .	5,200
. .	13	6	16	32	7	. .	1,285	2	24	200	4,800	140	3,360	140	3,360	132	3,168
. .	19	2	1	22	2	1	1,720	2									

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* Bushels.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Mines,	3	....	94	4,512	96	4,608	60	2,880	72	3,526
Etna and Vesuvius Mines,	4	...	90	3,285	85	3,102	....	....	98	3,577
			175	4,812	106	4,077	....	....	125	4,812
			135	4,725	110	3,850	....	....	129	4,515
Fairmount Mines,	7	...	150	3,750	150	3,750	75	1,875	190	4,750
			75	1,875	70	1,750	150	4,500	110	2,750
			300	7,500	300	7,500	400	10,000	320	8,000
Orangeville Shaft,	2	....	70	1,260	68	1,224	68	1,224	68	1,224
			74	1,332	78	1,404	76	1,368	75	1,351
Home Bank,	...	...	210	8,400	200	8,000	225	9,000	200	8,000
Washington Mines,	7	...	200	6,400	155	4,960	160	5,120	90	2,880
Pancoast Mines,	5	....	85	3,825	95	4,275	88	3,960	90	4,050
Bethel, No. 1,	...	...	70	1,400	60	1,200	70	1,400	60	1,200
Jackson Mines,	....	..	270	4,860	250	4,500	150	2,700	200	3,600
Stoneboro' Mines,	..	....	110	2,860	94	2,444	100	2,600	110	2,860
			120	1,440	125	1,500	125	1,598	280	3,360
			95	1,928	89	1,809	100	1,566	115	1,993
			109	1,889	100	1,733	70	1,220	95	1,923
Red Bank Mines,	....	....	...	....	....	....	....	...	....	....
Monterey Mines,	....	....	....	....	....	....	....	....	....	....
Pardoe Mines,	4	....	300	9,000	330	9,900	330	9,900	400	12,000
			200	6,000	200	6,000	240	7,200	360	10,800
Barnes Mines,	4	...	100	3,000	80	2,400	80	2,400	100	3,000
			200	3,200	190	3,040	180	2,880	200	3,200
			100	3,000	90	2,700	90	2,700	90	2,700
Natrona Mines,	..	....	....		....	....	32	1,408	41	1,804
Wise Shaft,	..	...	....	....	....	....	...	...	....	....
Catfish Mines,	..	.	180	6,930	190	7,315	200	7,700	250	9,625
			240	9,240	220	8,470	280	10,780	100	3,850
Lower Hillville,	..	....	140	5,250	130	4,875	125	4,687	140	5,250
Pine Creek Furnace Mine,	6	....	....	....	....	..	..	....	....	....
Oakland, No. 2,	..	....	370	5,398	460	6,670	170	1,344	440	6,384
			120	1,028	180	1,529	410	5,949	175	1,386
Diamond Mines,	3	....	130	6,370	120	5,880	125	6,125	130	6,370
Hickory Coal Mine,	1	....	....	....	....	..	...	...	....	....
Stewardson Furnace,	1	...	92	4,140	85	3,825	95	4,275	104	4,680
Mahoning Furnace,	..	....	....	....	....	....	....	....	....	....
Pacific Slope,*	..	....	....	....	....	....	....	....	....	....
Clinton Coal Mine,†	....	....	....	....	....	....	....	....	....	....
Cannelton Coal Mine,†	..	....	....	....	....	....	....	....	....	....
Beaver Coal Mine.†	....	....	....	....	....	....	....	....	....	....
Cranberry Coal Mine,†	....	....	....	...	....	....	....	...	....	....
Mahoning Coal Mine,‡	....	....	....	....	....	....	....	....	...	..
Rimerton Coal Mine,‡	....	....	....	....	....	....	....	....	....	....

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* Not working during month.

† No report for month of June.

‡ Mines suspended operation for the present.

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
21	22	23	24	25	26	27	28	29	30	31	
. . . .	59	170	10,030	199	11,741	159	9,381	180	10,620	. . . .	Allegheny county.
. . . .	38½	293	11,280	288	11,088	. . .	. . .	305	11,742	. . .	Allegheny county.
. . . .	25	150	3,750	150	3,750	75	1,875	190	4,750	. . .	Clarion county.
	25	75	1,875	70	1,750	180	4,500	110	2,750		
	25	300	7,500	300	7,500	400	10,000	320	8,000		
. . . .	16	158	2,528	156	2,496	154	2,464	154	2,464	. . . .	Mercer county.
. . . .	40	240	9,600	230	9,200	260	10,400	230	9,200	. . . .	Mercer county.
. . . .	42	200	6,400	155	6,510	160	6,720	90	7,780	.	Jefferson county.
. . . .	76	58	4,408	63	4,788	60	4,560	61	4,636	. . . .	Jefferson county.
. . . .	22	180	3,960	170	3,740	170	3,740	160	3,520	. . . .	Mercer county.
. . . .	5½x5	280	6,160	270	5,940	275	6,050	290	6,380	. . . .	Mercer county.
. . . .	18	170	3,060	175	3,150	160	2,880	195	3,510	. . . .	Mercer county.
. . . .	26	200	5,233	195	5,070	270	7,020	330	8,580		
. . . .	25	41	1,100	29	725	42	1,050	43	1,075	. . .	Clarion county.
	27	73	1,971	62	1,674	62	1,674	41	1,107		
	16	57	912	109	1,741	60	960	72	1,152		
. . . .	3x3	. .	. . . .	. .	. .	. .	. .	. .	. .	. .	Clarion county.
. . . .	25	500	12,500	550	13,750	550	13,750	600	15,000	. . . .	Mercer county.
. . . .	18	200	3,600	190	3,420	200	3,600	200	3,600	. . .	Butler county.
.	25	100	2,500	120	3,000	100	2,500	100	2,500		
	20	60	1,800	60	1,800	70	2,100	70	2,100		
. . . .	7x6	50	1,800	50	1,800	55	1,980	53	1,908	. . . .	Allegheny county.
. . . .	7x5½	. . .	. . . .	. .	. . . .	. . .	. . . .	211	8,400	. . . .	Mercer county.
. . . .	38½	300	11,550	250	9,625	275	10,587	200	7,700	. .	Clarion county.
. . . .	38½	375	14,437	300	11,550	250	9,625	200	7,700		
. . . .	30	375	11,250	340	10,200	300	9,000	375	11,250	. . .	Clarion county.
. . . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . .	. . .	. . . .	. . . .	Armstrong county.
. . . .	8x 5 10′′	220	10,265	200	9,333	180	8,399	190	8,865	. . . .	Mercer county.
. .	4x4	80	1,280	78	1,248	75	1,200	80	1,280	. . . .	Jefferson county.
. . . .	4x8	. . .	5,850	. . .	6,000	. .	5,850	. . .	5,850	. . . .	Mercer county.
. . .	20	212	4,240	160	3,200	150	3,000	136	2,720	. . . .	Armstrong county.
. . . .	. . .	. .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Armstrong county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . .	. . . .	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . .	. .	. . . .	. . .	. . . .	. . . .	Lawrence county.
. . . .	. . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Beaver county.
. . . .	. . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Lawrence county.
. . . .	. . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Venango county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. .	Armstrong county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Armstrong county.

A **STATEMENT** *of the Names, Power, Capacity, and Ventilation of the* *vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Etna and Vesuvius Mines,	Lewis, Dalzel & Co., and Spang, Chalfant & Co.,	Bituminous,	Drift,	. .	. .	. .
Washington Mines,	Frank Williams,	Bituminous,	Drift,	. .	. .	. .
Pancoast Mines,	Heim, Goodwill & F. Williams,	Bituminous,	Drift,	. .	. .	. .
Bellview Mines,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Stoneboro' Mines,	Mcreer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Natrona Mines,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	1	20
Home Bank,	Buhl, Westerman & Co.,	Bitu. block,	Shaft,	1	1	50
Beaver Mines,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .
Stewardson Furn. Mines,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Red Bank Furnace Mine,	Reynolds & Morehead,	Bituminous,	Drift,	. .	. .	. .
Fairmount Mines,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pine Creek Furn. Mines,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Orangeville Shaft,	Morris Coal Company,	Bitu. block,	Shaft,	1	2	45
Jackson Centre Mines,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Catfish Mines,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Neshannock, No. 2,	J. Phillips & Co.,	Bitu. block,	Shaft,	1	1	20
Monterey Mines,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Diamond,	Diamond Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Wise Shaft,	Snyder Coal Company,	Bitu. block,	Shaft,	2	1	40
Oakland, No. —,	Pierce & Frampton,	Bitu. block,	Shaft,	2	1	32
Baker Bank,	D. C. Benham, L. S. Hoyt for Scott & Co.,	Bituminous,	Drift,	. .	. .	. .
Mineral Ridge,	Mineral Ridge Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pacific Slope,	Dunham, Roberts & Co.,	Bitu. block,	Slope,	3	1	40
Pardoe Mines,	M. M. and M. Company,	Bituminous,	Drift,	1	. .	. .
Barnes' Mines,	M. M. and M. Company,	Bituminous,	Drift,	1	1	10
Mahoning Furnace,	J. A. Colwell & Co.,	Bituminous,	Drift,		. .	. .
Bethel, No. 1	Curtis, Boyce & E. A. Wheeler,	Bitu. block,	Shaft,	1	1	30
Cannelton Mine,*	Cannelton Coal Company.					

* Mine not running during month.

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of July, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Ventilation.									
										1st week.		2d week.		3d week.		4th week.	
								Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
. .	29	1	11	41	3	1	3,536	3	6¼x6¼	Idle.	. .	160	6,720	156	6,552	160	6,710
. .	4		1	5	. .	4	282⅔	2	6x7	180	7,560	160	6,720	120	5,040	130	5,460
. .	22	5	6	33	2	. .	1,165	3	6x7	105	4,410	115	4,830	110	4,620	108	4,556
1	45	6	10	61	5	. .	2,520	2	46	.	. . . .	132	6,072	115	5,290	108	4,968
									27	Idle.	. .	230	6,210	204	5,508	174	4,698
1	120	24	24	168	8	. .	5,149¼	2	26	100	2,600	97	2,522	105	2,730	115	2,990
									5¼	290	1,643	300	1,700	350	1,983	300	1,700
									24	310	7,440	315	7,560	300	7,200	330	7,820
1	32	8	10	50	9	1	†57,100	2	6¼x6	31	1,163	81	3,037	80	3,000	41	1,528
5	70	10	9	89	4	. .	3,900	2	5¼x7	225	8,662	200	7,700	200	7,700	220	8,470
. .	95	20	23	138	8	5	3,374	2	5¼x6	300	9,900	275	9,075	275	9,075	280	9,240
. .	13	7	16	36	7		1,280	2	24	124	2,976	132	3,168	140	3,360	130	3,120
. .	21	14	13	48	5	2	778	3	34	54	1,836	56	1,904	48	1,632	Idle.	
									31	47	1,598	42	1,428	55	1,870		
									16	58	896	65	1,040	54	896		
. .	61	2	10	73	8	1	2,047¾	7	36	200	7,200	150	5,400	150	5,400	150	5,400
									36	100	3,960	200	7,200	200	7,200	110	2,960
									36	70	2,520	70	2,520	70	2,520	60	2,160
									36	100	3,600	100	3,600	100	3,600	100	3,600
									36	50	1,800	50	1,800	50	1,800	45	1,620
									36	210	7,560	125	4,500	125	4,500	300	10,800
									36	300	10,800	210	7,560	200	7,200	290	10,440
. .	17	10	. . .	27	4	3	36,000	3									
2	41	11	18	70	2	4	1,772	2	4x4	352	5,632	352	5,632	356	5,696	352	5,632
. .	40	8	4	52	2	2	1,748	2	5′ 2″ x 5′ 8″	240	7,026	250	7,312	246	7,202	254	7,436
. .	30	1	2	33	2	. .	1,007	2	7¼x6	225	10,125	150	6,750	200	9,000	165	7,425
. .	60	10	7	77	5	. .	2,4 9	2	7x5¼	300	11,550	200	7,700	200	7,700	300	11,550
									7x5¼	325	12,512	160	6,160	250	9,625	250	9,625
2	35	4	9	48	2	. .	1,500	2	12x5	70	4,200	70	4,200	70	4,200	70	4,200
. .	8	1	4	13	1	1	234	2	36	. . .	. . .	. . .	.	75	2,700	90	3,240
. .	22	3	. .	25	3	. .	6,000	5	49	150	7,350	150	7,350	145	7,105	150	7,350
5	70	6	6	82	3	. .	3,000	2	7x5¼				. . .	. . .	. . .	220	8,215
2	78	7	11	96	5	. .	1,359	2	6¾x5¼	200	7,702	. . .	. . . .	. .	. . . .	190	7,416
. .	74	20	12	106	5	1	3,000	2	6x7	‡							
.	81	14	9	104	7	1	4,682	2	6x7	75	3,150	67	2,814	60	2,520	75	3,150
									5x6	100	3,000	120	3,600	100	3,000	150	4,500
2	28	16	19	63	3	4	1,043	3	7x6	380	9,880	370	9,435				
.	75	16	17	108	5	2	2,929	2	30	400	12,000	365	10,950	380	11,400	380	11,400
1	68	20	18	106	4	2	2,438	9	36	300	10,800	320	11,500	310	11,160	330	11,880
. .	17	3	1	21	3	1	1,735	2									
1	47	7	16	70	4	2	631⅓	2									

† Bushels. ‡ Ventilated by furnace.

A STATEMENT *of the Names, Power, Capacty, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Etna and Vesuvius Mines,	3	...	Idle.	...	93	3,394	58	2,117	90	3,285
					110	4,135	94	3,219	115	4,427
					115	4,025	90	3,065	122	4,270
Washington Mines,	2	...	90	2,880	140	4,480	100	3,200	120	3,840
Pancoast Mines,	5	...	85	4,275	95	4,275	90	4,050	88	3,960
Bellview Mines,	4	...	Idle.	...	85	4,165	72	3,528	44	2,156
Stoneboro' Mines,	4	...	110	1,815	115	1,897	150	2,475	160	2,640
			135	2,160	140	2,240	135	2,160	145	2,320
			115	1,955	110	1,870	120	2,040	160	2,720
			105	2,100	110	2,200	...	3,600	280	3,360
Natrona Mines,	...	...	31	1,400	15	683	20	910	18	819
Home Bank,	...	...	175	7,000	160	6,410	165	6,600	195	7,800
Beaver Mines,	...	...	130	3,476	110	2,941	110	2,941	120	3,250
Stewardson Furnace Mines,	...	...	96	4,320	104	4,680	85	3,825	80	3,600
Red Bank Furnace Mine,	...	...	...	...	...	...	...	...	...	...
Fairmount Mines,	...	...	210	5,250	110	2,750	100	2,500	200	5,000
			150	3,750	210	5,250	200	5,000	125	3,125
			70	1,750	110	2,500	100	2,500	100	2,500
			110	2,750	150	2,750	150	3,750	100	2,500
			75	1,875	70	1,750	70	1,750	75	1,875
			300	7,500	110	2,750	110	2,750	290	7,250
			400	10,000	300	7,500	110	2,750	330	8,250
Pine Creek Furnace Mines,	...	...	...	...	...	...	...	...	...	...
Orangeville Shaft,	...	...	156	2,496	180	2,880	176	2,816	180	2,880
			120	2,400	130	2,600	135	2,700	130	2,600
Jackson Centre Mines,	...	...	300	5,400	320	5,760	350	6,300	365	6,570
Lower Hillville,	...	...	200	7,500	140	5,250	175	6,562	150	5,625
Catfish Mines,	2	...	280	9,800	180	6,300	180	6,300	280	9,800
			300	10,500	100	3,500	230	8,050	230	8,050
Neshannock, No. 2,	...	...	140	4,200	140	4,200	140	4,200	140	4,200
Monterey Mines,	...	...	...	...	...	...	50	1,800	60	2,160
Diamond,	3	...	130	6,370	135	6,615	135	6,615	130	6,370
Wise Shaft,	...	...	...	...	...	...	...	...	220	8,215
Oakland, No. —,	...	...	300	4,527	4,527	...	...	...	290	4,376
			140	1,346	1,346	...	...	...	150	1,443
Baker Bank,	...	...	...	...	...	...	...	...	...	...
Mineral Ridge,	...	...	58	2,050	63	2,135	53	2,843	58	2,050
Pacific Slope,	...	...	75	2,625	90	3,150	...	...	...	...
Pardoe Mines,	...	...	80	2,400	70	2,100	70	2,100	70	2,100
Barnes' Mines,	...	...	60	1,800	70	2,000	60	1,800	60	1,800
Mahoning Furnace,	...	...	...	...	...	...	...	...	...	...
Bethel, No. 1,	...	...	...	...	...	...	...	...	...	...
Cannelton Mine,	...	...	...	...	...	...	...	...	...	...

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
295¼	. . .	. . .	Idle.	293	11,280	253	9,740	295	11,357	. . . .	Allegheny county.
. . . .	42	90	3,780	160	6,720	120	5,040	130	5,460	. . . .	Jefferson county.
. . . .	76	58	4,408	63	4,188	61	4,636	60	4,560	. . . .	Jefferson county.
. . . .	59	. . .	Idle.	215	12,285	167	9,519	180	10,260	. . . .	Allegheny county.
. . . .	18	170	3,060	180	3,240	250	4,500	230	4,140	. . . .	Mercer county.
. . . .	27½	300	8,250	290	7,975	360	9,900	360	9,900		
. . . .	6x6	. . .	. . . .	75	2,700	42	1,512	80	2,880	. . . .	Allegheny county.
. . . .	5x8	200	8,000	175	7,000	180	7,200	210	8,400	. . . .	Mercer county.
. . . .	3½x5¼	725	13,412	700	12,950	700	12,950	710	13,135	. . . .	Lawrence county.
. . . .	20	135	2,700	136	2,720	160	3,200	140	2,800	. . . .	Armstrong county.
. . . .	25	43	1,075	44	1,100	62	1,550	. . .	Idle.	. . . .	Clarion county.
	27	64	1,728	73	1,971	43	1,160				
	16	70	1,120	57	912	50	800				
. . . .	25	210	5,250	110	2,750	100	2,500	200	5,000	. . . .	Clarion county.
. . . .	25	150	3,750	210	5,250	200	5,000	125	3,120		
. . . .	25	70	1,750	100	2,500	100	2,500	100	2,500		
. . . .	25	110	2,750	150	3,750	150	3,750	100	2,500		
. . . .	25	75	1,875	70	1,750	70	1,750	75	1,875		
. . . .	25	300	7,500	110	2,750	110	2,750	290	7,250		
. . . .	25	400	10,000	300	7,500	110	2,750	330	8,250		
. . . .	. . .	. . .	. . . .	. . .	. . . .		. . . .	. . .	. . . .	. . . .	Armstrong county.
. . . .	4x4	294	4,704	313	5,008	313	5,008	320	5,120	. . .	Mercer county.
. . . .	5½x4	320	7,040	322	7,084	315	6,930	325	7,150	. . . .	Mercer county.
. . . .	7x5	425	14,875	250	8,750	325	11,375	375	13,125	. . . .	Clarion county.
. . . .	7x5½	200	7,700	165	6,332	150	5,775	200	7,700	. . . .	Clarion county.
. . . .	7x5½	225	8,662	150	5,775	200	7,700	215	8,177		
. . . .	4x5	210	4,200	210	4,200	210	4,200	210	4,200	. . . .	Mercer county.
. . . .	36	. . .	. . . .	. . .	. . . .	40	1,400	55	1,980	. . . .	Clarion county.
. . . .	5x4	125	3,125	120	3,000	122	3,050	120	3,000	. . . .	Jefferson county.
. . . .	. . .	. . .	. . . .	. .	. . . .	. . .	. . . .	228	8,675	. . . .	Mercer county.
. . . .	8¼x5½	160	7,160	. . .	. . . .	. . .	. . . .	165	7,385	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Beaver county.
. . . .	5x6	200	6,000	150	4,500	200	6,000	300	9,000	. . . .	Clarion county.
	4x5	150	3,000	200	4,000	120	2,400	150	3,000		
. . . .	4¼x5	345	7,331	390	7,886	. . .	. . .	. . .	. . . .	. . . .	Mercer county.
. . . .	25	450	11,250	420	10,500	450	11,250	450	11,250	. . . .	Mercer county.
. . . .	20	400	8,000	410	8,200	410	8,200	400	8,000	. . . .	Butler county.
	24	200	4,800	200	4,800	170	4,080	170	4,080		
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Armstrong county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Beaver county.

A **STATEMENT** *of the Names, Power, Capacity, and Ventilation of the* *vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Mines,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Jackson Coal Mines,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pacific Slope,	Dunham, Roberts & Co.,	Bitum. block	Slope,	3	1	40
Orangeville Shaft,	Morris Coal Company,	Bitum. block	Shaft,	1	2	20 25
Fairmount Mines,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Monterey Mines,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Cannelton Mines,	J. F. Mansfield,	Bitum. can'l	Drift,	. .	. .	. .
Wise Shaft,	Snyder Coal Company,	Bitum. block	Shaft,	2	1	40
Mineral Ridge,	T. J. Skidmore,	Bituminous,	Drift,	. .	. .	. .
Washington,	Frank Williams,	Bituminous,	Drift,	. .	. .	. .
Pancoast,	Heim, Goodwill & F. Williams,	Bituminous,	Drift,	. .	. .	. .
Natrona,	Penn'a Salt Manufacturing Co.,	Bituminous,	Drift,	1	1	20
Home Bank,	Buhl, Westerman & Co.,	Bitum. block	Shaft,	1	7	50
Hickory Mine,	Spearman & Co.,	Bitum. block	Shaft,	3	1	20
Sligo Branch,	Sligo Branch Coal Company,	Bituminous,	Drift,	. .	. .	. .
Diamond Mine,	Diamond Gas Coal Company,	Bituminous,	Drift,	. .	. .	. .
Stewardson Furn'e Mine	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Red Bank,	Reynolds & Morehead,	Bituminous,	Drift,	. .	. .	. .
Neshannock, No. 2,	I. Phillips & Co.,	Bitum. block	Shaft,	1	1	20
Pine Creek Furnace,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Stoneboro',	Mercer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Beaver Mine,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .
Barnes Mine,	M. M. & M. Co.,	Bituminous,	Drift,	1	1	10
Pardoe,	M. M. & M. Co.,	Bituminous,	Drift,	. .	. .	. .
Catfish Mines,	Pitt Coal and Mining Company,	Bituminous,	Drift,	.	. .	. .
Lower Hillville,	Pitt Coal and Mining Company,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 2,*	Pierce Frampton,	Bitum. block	Shaft.			
Maple Grove,	S. P. McCalmont,	Bituminous,	Drift.			

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* Reported not having worked a single day in August.

† Mined only 163 tons, and employed only from six to nine men in August.

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of August, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	44	5	12	61	6	. .	3,600	2	46	111	5,106	110	5,060	134	6.164	119	6,900
									27	200	5,400	280	7,560	250	6,750	204	5,508
. .	32	10	4	46	2	2	951	3	5x2	254	7,436	245	7,173	210	7,028	250	7,312
									5x8								
2	28	16	19	63	4	. .	2,201	3	7x6	325	8,287	385	9,817	. . .	. . . . .	320	8,160
									4x3								
									6x0								
2	38	16	18	72	2	4	1,988	2	4x4	360	5,760	355	5,680	350	5,600	355	5,680
. .	50	2	2	54	8	1	2,738¼	5	36	200	7,200	100	6,840	200	7,200	195	7,020
									36	150	5,400	150	5,400	130	4,680	145	5,220
									36	100	3,600	100	3,600	90	3,240	90	3,240
									36	90	3,240	95	3,420	100	3,600	90	3,240
									36	200	7,200	220	7,920	210	7,560	210	7,560
. .	12	1	2	15	1	1	349	2	36	75	2,700	70	2,520	100	3,600	75	2,700
. .	12	. .	4	16	1	1	500	2	7x8	. .	. .	. . .	. . . .	. . .	. . . .	50	2,800
5	75	5	6	86	4	. .	2,000	2	7x6	156	6,552	156	6,552	109	4,578	125	5,250
. .	80	12	9	101	7	1	4,747	2	6x7	100	4,200	75	3,150	75	3,150	67	2,814
									4x7	150	4,200	200	5,600	150	4,200	150	4,200
. .	6	. .	1	7	1	. .	507	2	6x7	180	7,560	130	5,460	160	6.720	120	5,040
. .	31	7	6	44	3	. .	2,733¼	2	6x7	115	4,830	105	4,410	108	4,536	110	4,620
1	33	8	10	51	9	1	*68,630	4	6¼x6	50	1,868	70	2,625	80	3,000	50	1,868
7	70	11	6	87	4	. .	4,200	2	5x6	230	8,855	200	7,700	230	8,855	250	9,625
									7x0								
3	31	5	11	47	2	. .	1,500	2	5x8	. . .	5,100	. . .	5,100	. . .	5,100	. .	5,100
. .	25	. .	1	26	1	1	630										
. .	25	3	. . .	28	3	. .	4,000	5	7x7	180	8,820	185	9,065	180	8,820	190	9,310
. .	15	8	15	38	7		1,352	2	24	132	3,168	212	5,088	141	3,456	152	3,648
. .	16	18	18	52	5	2	784	3	34.5	. . .	. . . .	. . .	. . . . .	63	2,142	72	2,448
									34.5	. . .	. . . .	. . .	. . . .	105	3,570	80	2,720
									16.	. . .	. . . .	. . .	. .	74	1,184	60	960
2	35	4	8	47	2	1	1,800	.	12x5	70	4,200	70	4,200	70	4,200	70	4,200
. .	17	7	. . .	27	3	.	*36,000	2	16	200	3,200						
1	120	28	28	176	8	. .	6,108	2	24	400	9,600	410	9,840	390	9,360	395	9,480
									27	115	3,105	110	2,970	120	3,240	115	3,105
									5	330	1,650	340	1,700	350	1,750	335	1,635
. .	109	22	23	154	8	5	5,156	. .	5½x6	275	9,075	300	9,900	280	9,240	275	9,075
2	69	14	13	96	4	2	3,500	11	30	300	9,000	300	9,000	300	9,000	300	9,000
									36	200	7,200	150	4,400	150	4,400	150	4,400
									18	100	1,800	100	1,800	100	1,800	100	1,800
									20	300	6,000	200	4,000	200	4,000	200	4,000
									24	100	2,400	100	2,400	100	2,400	100	2,400
. .	83	14	17	114	6	3	3,200	2	30	430	12,900	500	15,000	470	14,100	470	14,100
. .	70	20	10	100	5	. .	2,740	3	7x5	300	10,500	250	8,750	200	7,000	200	7,000
									7x5	150	5,250	200	7,000	150	5,250	150	5,250
. .	29	2	2	33	3	. .	980	2	7½x6	180	8,100	150	6,750	160	7,200	110	4,950

* Bushels.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per month at inlet.	Number of headings.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Bellview Mines,	....	3	72	3.578	87	4,263	115	5,635	91	4,459
Jackson Coal Mines,	247	....	300	7,425	270	6,682	280	6,930	300	7,425
Pacific Slope,	343	4	60	2,100	70	2,450	....	....	70	2,450
Orangeville Shaft,	....	2	200	3,200	180	2,880	160	2,560	125	2,500
			130	2,600	125	2,500	130	2,600	140	2,800
Fairmount Mines,	....	5	210	5,250	220	5,500	220	5,125	210	5,250
			200	5,000	190	4,750	150	3,750	180	4,500
			100	2,500	100	2,625	100	2,500	95	2,375
			80	2,000	90	2,250	80	2,000	95	2,375
			300	7,500	300	7,500	290	7,250	315	7,875
Monterey Mines,	....	....	70	2,520	50	1,800	75	2,700	50	1,800
Cannelton Mines,	....	....	....	....	....	....	....	....	200	1,800
Wise Shaft,	136½	2	301	5,958	301	5,958	240	4,815	256	5,147
Mineral Ridge,	....	3	150	5,250	125	4,375	125	4,375	150	5,250
			86	3,612	75	3,150	75	3,150	80	3,612
			75	3,000	60	2,400	60	2,400	75	3,000
Washington,	....	2	90	2,880	120	3,840	140	4,480	100	3,200
Pancoast,	....	5	75	4,275	85	3,825	90	4,050	88	3,960
Natrona,	....	3	20	750	35	1,313	40	1,500	....	....
Home Bank,	....	....	200	8,000	160	6,400	200	8,000	200	8,000
Hickory Mine,	....	2	....	....	....	....	....	....	....	....
Sligo Branch,	....	....	....	....	....	....	....	....	....	....
Diamond Mine,	....	....	125	3,750	130	3,900	126	3,780	130	3,900
Stewardson Furn'e Mine,	....	1	112	5,040	104	4,680	92	4,140	100	4,500
Red Bank,	....	....	....	....	....	....	....	....	....	....
Neshannock, No. 2,	....	....	200	4,000	200	4,000	200	4,000	200	4,000
Pine Creek Furnace,	....	....	200	3,200	....	....	....	....	....	....
Stoneboro',	....	....	160	3,360	155	3,255	165	3,465	160	3,360
			170	2,677	168	2,640	160	2,520	175	2,756
			170	2,506	160	2,360	165	2,433	160	2,360
			160	1,920	165	1,980	170	2,040	155	1,860
Beaver Mines,	....	....	110	2,941	120	3,250	100	2,675	130	3,476
Barnes Mines,	....	2	300	9,000	250	7,500	250	7,500	250	7,500
Pardoe,	....	3	300	9,000	320	9,600	320	9,600	300	9,000
			200	6,000	160	4,800	160	4,800	180	5,400
Catfish Mines,	....	2	280	9,800	230	8,050	180	6,300	180	6,300
			140	4,700	180	6,300	130	4,550	130	4,550
Lower Hillville,	....	1	160	6,000	140	5,250	145	5,437	100	3,750
Oakland, No. 2,	....	....	....	....	....	....	....	....	....	....
Maple Grove,	....	....	....	....	....	....	....	....	....	....

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
21	22	23	24	25	26	27	28	29	30	31	
. . .	57	194	11,058	209	. . . .	. . .	. . . .	. . .	. .	. . . .	Allegheny county.
	59				12,331	224	13,216	229	12,980		
287	5x6	334	7,356	330	7,268	328	7,224	333	7,334	. . . .	Mercer county.
	4x0										
66⅔	. . .	315	6,370	340	6,740	. . .	. . . .	250	5,416	. . . .	Mercer county.
. . . .	4x4	335	5,360	330	5,280	330	5,280	325	5,200	. . . .	Mercer county.
. . . .	25	210	5,250	220	5,500	205	5,725	210	5,250	. . . .	Clarion county.
. . . .	25	200	5,000	190	4,750	150	3,750	180	4,500		
. . . .	25	100	2,500	105	2,625	100	2,500	45	2,375		
. . . .	25	80	2,000	90	2,250	80	2,000	95	2,375		
. . . .	25	300	7,500	300	7,500	290	7,250	315	7,875		
. . . .	36	50	1,800	70	2,520	70	2,520	50	1,800	. . . .	Clarion county.
. . . .	5x6	. . .	. . . .	. . .	. . . .	. . .	. . . .	175	5,250	. . . .	Beaver county.
274½	7x3½	270	6,737	270	6,737	204	4,998	220	5,390	. . . .	Mercer county.
. . . .	6x4	200	4,800	120	2,810	150	3,600	75	1,800	. . . .	Clarion county.
. . . .	5x6	200	6,000	300	9,000	300	9,000	200	6,000		
. . . .	6x7	180	7,580	130	5,460	160	6,720	120	5,040	. . . .	Jefferson county.
. . . .	8½x9	63	4,788	58	4,408	61	4,636	60	4,560	. . . .	Jefferson county.
. . . .	7x6	75	3,150	87	3,654	45	1,890	60	2,420	. . . .	Allegheny county.
. . . .	5x8	215	8,600	175	7,000	225	9,000	225	9,000	. . . .	Mercer county.
. . . .	4x8	. . .	5,870	. . .	5,870	. . .	5,870	. . .	5,870	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Clarion county.
. . . .	5x5	105	2,625	110	2,750	100	2,500	115	2,875	. . . .	Jefferson county.
. . . .	20	136	2,720	220	4,400	152	3,040	156	3,120	. . . .	Armstrong county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	57	1,425	52	1,300	. . . .	Clarion county.
						64	1,728	70	1,890	. . . .	
						62	992	138	2,208	. . . .	
. . . .	5x4	210	4,200	210	4,200	210	4,200	210	4,200	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . .	. . . .	. . . .	Armstrong county.
. . . .	27	330	8,910	360	9,720	340	9,180	345	9,315	. . . .	Mercer county.
. . . .	18	230	4,140	230	4,140	240	4,320	235	4,230		
. . . .	3½x5½	700	12,950	725	13,412	650	12,025	680	12,580	. . . .	Lawrence county.
. . . .	30	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Butler county.
	18										
	24										
	20										
. . . .	25	560	14,000	600	15,000	580	14,500	580	14,500	. . . .	Mercer county.
. . . .	7x5	200	7,000	200	7,000	150	5,250	150	5,250	. . . .	Clarion county.
. . . .	7x5	110	3,850	160	5,775	110	3,850	110	3,850	. . .	
. . . .	7x5	360	12,600	220	7,700	250	8,750	210	7,350	. . . .	Clarion county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . .	. . . .	Venango county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
nia, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Mine,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Natrona,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	1	20
Stewardson Furn. Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Pine Creek Furn. Mine,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Wise Shaft,	Snyder Coal Company,	Bitu. Block,	Shaft,	2	1	40
Home Bank,	Buhl, Westerman & Co.,	Bitu. Block,	Shaft,	1	1	50
Stoneboro' Mine,	Mercer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Jackson Coal Mine,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pardoe Mine,	M. M. and M. Company,	Bituminous,	Drift,	1	. .	. .
Barnes Mine,	M. M. and M. Company,	Bituminous,	Drift,	1	1	8
Orangeville Shaft,	Morris Coal Company,	Bituminous,	Shaft,	2	2	20 25
Monterey Mine,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Pancoast,	Heim, Goodwill & F. Williams,	Bituminous,	Drift,	. .	. .	. .
Maple Grove,	S. P. McCalmont,	Bituminous,	Drift,	. .	. .	. .
Fairmount,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Fairmount,	Fairmount Coal Company,	Bituminous,	. .	. .	. .	. .
Red Bank Furnace Mine,	Reynolds & Morehead,	Bituminous,	Drift,	. .	. .	. .
Hickory Mine,	Spearman & Co.,	Bitu. Block,	Shaft,	3	1	20
Mansfield,	J. F. Mansfield,	Bituminous,	Drift,	. .	. .	. .
Sligo Branch,	Sligo Branch Coal Company,	Bituminous,	Drift,	. .	. .	. .
Catfish Coal Works,	P. C. and M. Company,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville,	P. C. and M. Company,	Bituminous,	Drift,	. .	. .	. .
Beaver Mines,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .
Welsh Bank,	Wampum Coal Company,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 2,	Pierce & Frampton,	Bituminous,	Shaft,	2	1	. .
Oakland, No. 3,	Pierce & Scott,	Bituminous,	Shaft,	4	1	. .
Etna and Vesuvius,*	Spang, Chalfant & Co.,	Bituminous.				
Diamond Coal Works,*	Diamond Coal Company,	Bituminous.				
Mineral Ridge,	T. J. Skidmore,	Bituminous,	Drift,	. .	. .	. .

* Not running in September.

respective Collieries in the Second Bituminous Mine District of Pennsyl- of September, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	64	5	12	81	8	. .	4,000	2	46	124	5,704	120	5,520	133	6,118	175	8,050
									27	172	4,644	179	4,833	192	5,184	367	9,909
1	32	7	10	49	9	1	*61,000	4	6¼x6	60	2,250	50	1,875	35	1,313	25	938
. .	13	9	17	39	7	. .	1,161	2	24	136	3,264	140	3,360	147	3,528	208	4,992
. .	17	8	. . .	25	4	3	*36,000	3	35	125	4,375	125	4,375	125	4,375	125	4,375
5	75	5	6	86	4	. .	4,000	2	7x6	109	4,578	156	6,552	136	5,712	186	7,812
5	65	17	7	89	4	. .	4,550	2	5½x7	245	9,432½	250	9,625	235	9,047½	275	1,058½
1	120	25	25	170	8	. .	5,590	3	21	410	9,840	420	10,080	415	9,960	410	9,840
									27	110	2,970	100	2,700	97	2,619	110	2,970
									5	340	1,700	350	1,750	360	1,800	355	1,775
. .	28	6	4	38	2	2	1,000	3	5′ 8″ x 5′ 2″	175	5,123	180	5,270	175	5,123	170	4,976
1	93	13	27	133	6	2	3,460	2	30	400	12,000	410	12,300	410	12,300	420	12,600
1	78	16	18	112	5	2	3,656	10	20	300	6,000	330	6,600	300	6,000	300	6,000
									30	300	9,000	320	9,600	320	9,600	330	9,900
									30	200	6,000	180	5,400	200	6,000	200	6,000
2	38	13	19	70	2	4	1,400	2	4x4	335	5,680	340	5,440	. . .	. . . .	305	4,880
. .	10	1	2	13	1	. .	221	2	36	75	2,700	100	3,600	75	2,700		
. .	30	6	8	44	3	. .	3,408	3	6x7	105	4,410	110	4,620	130	5,460	105	4,410
. .	23	. .	6	29	3	3	522	2	6x6	150	5,400	200	7,200	175	6,300	150	5,400
. .	45	2	8	55	8	1	2,681	5	36	150	5,400	130	4,788	120	4,320	120	4,320
									36	110	3,960	120	4,320	105	3,780	100	3,600
. .	. . .	. .	. . .	. . .	. .	.	. . . .	. .	36	60	3,160	55	1,980	60	2,160	60	2,160
									36	110	3,960	105	3,780	110	3,960	100	3,600
									36	220	7,920	300	10,800	200	7,200	300	10,800
. .	28	19	20	65	7	3	1,764	3	24	114	3,876	100	3,400	76	2,584	120	4,080
									34	89	3,026	75	2,550	124	4,216	85	2,890
									16	131	2,096	72	1,182	34	544	63	1,008
3	29	3	11	43	2	. .	1,200	2	5x8	. .	5,500	. . .	5,500	. . .	5,500	. . .	5,500
. .	20	2	4	26	2	1	1,560	2	7x8	100	5,600	100	5,600	100	5,600	100	5,600
. .	19	.	7	26	2	. .	419	2									
. .	70	20	10	100	6	1	2,740	3	7x5	300	. . . .	225	. . . .	200	. . . .	375	
									7x5	350	. . . .	275	. . . .	300	. . .	300	
. .	32	2	2	36	3	1	1,100	2	7½x6	200	. . . .	180	. . . .	150	. .	210	
. .	103	21	23	147	8	5	3,026	2	5½x6	300	9,900	275	9,075	275	9,075	280	9,240
. .	90	. .	12	162	5	4	1,600	3	6x7	190	7,980	200	8,400	205	8,610	190	8,190
									5x3	200	3,000	195	2,950	185	2,775	180	2,700
									6x6	165	5,640	170	6,120	180	6,480	185	6,660
2	62	10	6	78	4	.	1,075	2	6¾x5½	165	6,124						
4	38	6	3	47	1												
. .	93	14	15	122	7	1	4,600	2	7x7	75	3,675	60	2,940	100	4,900	86	4.212
									5x5	200	5,000	300	7,500	75	1,875	150	3,750

* Bushels.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Mine,	3	....	67	3,149	74	3,478	92	4,324	116	5,452
Natrona,	3	....	....	....	....	....	....	....	....	....
Stewardson Furnace Mine,	1	....	80	3,600	120	5,400	100	4,500	96	4,320
Pine Creek Furnace Mine,	6	....	100	3,500	100	3,500	100	3,500	100	3,500
Wise Shaft,	2	....	234	4,641	267	4,817	250	4,912	350	6,702
Home Bank,	....	....	200	8,000	200	8,000	205	8,200	225	9,000
Stoneboro' Mine,	4	....	150	2,750	155	2,841	155	2,700	145	2,610
			110	1,732	120	1,890	130	2,047	135	2,129
			65	958	70	1,032	80	1,180	85	1,200
			155	2,480	160	2,560	170	2,720	175	2,800
Jackson Coal Mine,	2	....	240	5,280	245	5,390	235	5,770	237	5,214
Pardoe Mine,	3	....	200	6,000	210	6,300	210	6,300	210	6,300
Barnes Mine,	4	....	350	10,500	400	12,000	400	12,000	400	12,000
Orangeville Shaft,	2	....	105	2,100	95	1,900	....	....	70	1,400
			180	3,240	175	3,150	....	....	180	3,240
Monterey Mine,	....	....	70	2,520	75	2,700	70	2,520	....	....
Pancoast,	5	....	105	4,410	110	4,620	130	5,460	105	4,410
Maple Grove.	1	....	125	3,250	175	4,600	100	2,600	125	3.250
Fairmount,	5	....	120	3,000	120	3,000	110	2,750	133	3,325
			100	2,500	105	2,625	100	2,500	100	2,500
Fairmount,	....	....	60	1,500	50	1,250	60	1,500	55	1,375
			200	5,000	133	3,325	120	3,000	120	3,000
			300	7,500	333	8,325	220	5,500	260	6,500
Red Bank Furnace Mine,	....	....	....	....	....	....	....	....	....	....
Hickory Mine,	1	....	..	4,900	....	4,900	....	4,900	....	4,900
Mansfield,	1	....	1,050	6,300	1,050	6,300	1,050	6,300	1,050	6,300
Sligo Branch,	....	....	..	....	....	....	....	....	....	....
Catfish Coal Works,	....	....	280	....	225	....	180	....	350	....
			230	....	250	....	280	....	280	....
Lower Hillville,	1	...	180	....	160	...	140	....	200	....
Beaver Mines,	....	....	130	3,475	110	2,941	110	2,941	120	3,250
Welsh Bank,	3	....	265	14,840	275	15,400	278	15,560	270	15,120
Oaklaud, No. 2,	....	....	250	3,470	....	....	....	....	....	....
Oakland, No. 3,	2	....	....	....	180	2,822	....	....	185	3,392
					140	3,090	....	....	175	3,313
Etna and Vesuvius.*										
Diamond Coal Works.*										
Mineral Ridge,	....	....	75	2,625	100	3,500	75	2,625	60	2,100
			75	2,625	75	2,625	60	2,100	50	1,750
			150	5,250	150	5,250	100	3,500	75	2,625

* Not running in September.

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet-size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	59	185	10,915	191	11,058	206	12,154	338	19,912	. . . .	Allegheny county.
. . . .	7x6	70	2,940	100	4,200	120	5,040	35	1,470	. . . .	Allegheny county.
. . . .	20	140	2,800	144	2,880	152	3,040	212	4,240	. . . .	Armstrong county.
. . . .	16	100	1,600	100	1,600	100	1,600	100	1,600	. . . .	Armstrong county.
. . . .	7x3¼	230	5,635	302	7,398	265	6,992	340	8,330	. . . .	Mercer county.
. . . .	5x8	225	9,000	215	8,600	215	8,600	250	10,000	. . . .	Mercer county.
. . . .	. . .	250	9,450	358	9,666	355	9,585	335	9,585	. . . .	Mercer county.
. . . .	. . .	230	4,140	235	4,230	230	4,140	235	4,230		
. . . .	5¼x4	240	5,280	245	5,390	235	5,170	237	5,214	. . . .	Mercer county.
. . . .	30	500	15,000	520	15,600	520	15,600	530	15,900	. . . .	Mercer county.
. . . .	30	460	13,800	470	14,100	470	14,100	460	13,800	. . . .	Butler county.
. . . .	4x4	310	4,960	305	4,880	. . .	. . .	295	4,720	. . . .	Mercer county.
. . . .	36	50	1,800	50	1,800	60	2,160	. .	. . . .	. . . .	Clarion county.
. . . .	8½x9	56	4,368	60	4,680	72	5,472	56	4,368	. . . .	Jefferson county.
. . . .	5x5	400	10,000	425	10,625	400	10,000	500	12,500	. . .	Venango county.
. . . .	25	120	3,000	120	3,000	110	2,750	133	3,325	. . . .	Clarion county.
. . . .	25	100	2,500	105	2,625	100	2,500	100	2,500		
. . . .	25	60	1,500	50	1,250	60	1,500	55	1,375	. . . .	Clarion county.
. . . .	25	200	5,000	133	3,325	120	3,000	120	3,000		
. . . .	25	300	7,500	333	8,325	220	5,500	250	6,500		
. . . .	25	62	1,400	65	1,625	120	3,100	76	1,900	. . . .	Clarion county.
.	27	30	810	73	1,975	64	1,728	92	2,484		
	16	109	1,744	66	1,056	57	912	104	1,664		
. . . .	4x8	.	6,180	. . .	6,180	. . .	6,180	. . .	6,180	. . . .	Mercer county.
. . . .	3x3	600	5,400	600	5,400	600	5,400	600	5,400	. . . .	Beaver county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Clarion county.
. . . .	7x5	200	. . . .	160	. . .	160	. . . .	300	. . . .	. . . .	Clarion county.
. . . .	7x5	160	. . . .	200	. . . .	250	. . . .	225			
. . . .	7x5	325	. . . .	300	. .	250	. . . .	375	. .	. . . .	Clarion county.
. . . .	3⅗x5½	725	13,412	700	12,950	700	12,950	710	13,135	. . . .	Lawrence county.
. . . .	6x6	335	12,780	364	13,104	360	12,960	345	12,420	. . . .	Lawrence county.
. . .	8′2″ x 5′5″	140	6,192	. . .	. . . .	. . .	. . . .	. . .	. . .	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . . .	Mercer county.
. . . .	5x5	300	7,500	300	7,500	300	7,500	200	5,000	. . . .	Clarion county.
. . . .	4x6	120	2,880	150	3,600	150	3,600	120	2,880		

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the* *vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Bellview,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Natrona,	Penn Salt Manufacturing Co.,	Bituminous,	Drift,	1	1	20
Stewardson Fur'ce Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	.
Orangeville Shaft,	Morris Coal Company,	Bitu. block,	Shaft,	1	2	45
Pine Creek Fur'ce Mine,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Hickory Shaft,	Spearman & Co.,	Bitu. block.	Shaft,	2	1	20
Neshannock, No. 2,	J. Phillips & Co.,	Bitu. block,	Shaft,	1	1	20
Pancoast,	Heim, Goodwill & F. Williams,	Bituminous,	Drift,	. .	. .	. .
Barnes Mine,	M. M. and M. Company,	Bituminous,	Drift,	1	1	10
Pardoe Mine,	M. M. and M. Company,	Bituminous,	Drift,	1	. .	15
Maple Grove Mine,	S. P. McCalmont,	Bituminous,	Drift,	. .	. .	. .
Philadelphia Mine,	James Kennedy,	Bituminous,	Drift,	. .	.	. .
Diamond Coal Works,	Diamond Coal Company,	Bituminous,	Drift,	. .	. .	. .
Monterey Mine,	J. McCollum,	Bituminous,	Drift,	. .	. .	. .
Sligo Branch Coal Works	Sligo Branch Coal Company,	Bituminous,	Drift,	. .	. .	. .
Fairmount,	Fairmount Coal Company,	Bituminous,	. . . .	. .	. .	. .
Stoneboro' Mine,	Mercer Iron and Coal Company,	Bituminous,	Slope,	. .	1	75
Jackson Coal Mine,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Burnette,	A. Burnette,	Bituminous,	Drift,	1	. .	. .
Cannelton,	I. F. Mansfield,	Bituminous,	Drift,	. .	. .	. .
Wise Shaft,	Snyder Coal Company,	Bitu. block,	Shaft,	2	1	40
Mineral Ridge,	T. J. Skidmore,	Bituminous,	Drift,	. .	. .	. .
Red Bank Furnace Mine,	Reynolds & Moorhead,	Bituminous,	Drift,	. .	. .	. .
Oakland, No. 2,	Pierce & Frampton,	Bitu. block,	Shaft,	2	1	. .
Oakland, No. 3,	Pierce & Scott,	Bitu. block,	Shaft,	3	1	. .
Catfish Coal Works,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Home Bank,	Buhl, Westerman & Co.,	Bitu. block,	Shaft,	1	1	50
Welsh Bank,	Wampum Coal Company,	Bituminous,	Drift,	. .	. .	. .
Beaver Mine,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of October, 1878.

										VENTILATION.							
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute in inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	64	8	9	81	8	. .	4,946	2	46	116	5,306	115	5,014	147	6,752	142	6,532
									47	130	6,110	230	10,557	185	8,695	190	8,930
1	33	5	10	48	9	1	*59,500	2	108	60	6,480	65	7,020	240	25,920	55	5,940
. .	13	10	15	38	7	. .	1,332	2	24	104	2,496	144	3,456	152	3,658	160	3,840
2	38	13	18	69	2	4	2,022	2	4x4	375	6,000	375	6,000	370	5,920	240	5,440
. .	16	7	. .	23	4	3	*36,000	2	35	100	3,500	100	3,500	100	3,500	100	3,500
3	35	3	11	49	3	. .	1,500	2	5x8	. . .	5,600	. . .	5,330	. . .	5,700	. . .	5,000
4	37	2	8	47	2	. .	1,800	. .	5x12	70	4,200	80	4,800	86	5,200	88	5,280
. .	32	7	4	43	3	.	2,505	3	6x7	105	4,410	110	4,620	114	4,788	114	4,788
1	89	20	16	125	6	3	4,740	14	30	300	5,000	310	9,300	300	9,000	300	9,000
1	97	21	12	130	5	2	4,160	2	30	420	12,600	440	13,200	450	13,500	450	13,500
. .	27	2	8	37	2	2	1,130	2	6x6	125	4,500	133	4,788	. . .	. . . .	150	5,400
. .	16	2	5	23	2	. .	542	2	3x5½	. . .	. . . .	. . .	. . . .	. . .	. . . .	170	2,975
.	22	2	. .	24	2	. .	1,000	3	7x7	178	8,575	180	8,820	170	8,330	175	8,575
. .	10	1	2	13	1	.	300	2	36	100	3,600	75	2,700	100	3,600		
. .	22	. .	1	23	2	. .	619	2	6x6	. . .	. . . .	. . .	. . . .	. . .	. . . .	81	2,916
									6x6	. .	. . . .	. . .	. . . .	. . .	. . . .	67	2,412
. .	59	3	9	71	9	1	3,219	5	36	240	8,640	220	7,920	300	10,800	310	11,160
									36	200	7,200	190	6,840	200	7,200	180	6,480
									36	150	5,400	125	5,400	120	4,320	120	4,320
									36	150	3,600	90	3,240	95	3,420	100	3,600
									36	125	4,500	120	4,320	105	3,780	150	5,400
1	135	15	24	174	8	. .	6,229	2	24	400	9,600	390	9,360	395	9,480	410	9,840
									27½	120	3,300	130	3,575	125	2,437	128	3,520
									5	350	1,783	360	1,800	345	1,725	350	1,783
. .	40	8	4	52	3	2	1,963	3	5′ 2″ x 5′ 8″	254	7,436	250	7,312	240	7,026	245	7,173
1	25	5	4	34	2	. .	630	2	6½ x 6½	90	3,785	80	3,570	80	3,360	95	3,990
. .	20	2	4	26	3	1	1,500	. .	7x8	80	4,480	100	5,600	100	5,600	95	5,320
5	75	5	6	86	4	. .	6,000	2	7x6	129	5,818	150	6,552	147	6,174	120	5,040
. .	93	14	15	122	7	1	5,134	2	7x7	100	4,900	75	3,675	50	2,450	100	4,900
									7x5	200	5,000	150	3,750	150	3,750	150	3,750
. .	38	17	29	84	7	3	2,172	3	37	108	3,672	72	2,446	94	3,196	105	3,570
									34	87	2,858	56	1,904	85	2,890	120	4,880
									16	96	1,536	107	1,712	60	960	80	1,280
2	50	5	5	60	3	. .	. . . .	. .	6¾ x 5¼	200	7,422	220	8,164	195	7,236	180	6,681
4	41	1	6	48	2	. .	. . . .	2									
. .	70	20	10	100	5	. .	3,300	2	7x5	300	10,500	150	5,250	140	4,900	300	10,500
									7x5	250	8,750	140	4,900	160	5,600	200	7,000
. .	31	. .	2	33	3	. .	1,100	2	7½ x6	150	6,750	140	6,300	110	4,950	250	9,000
5	61	16	5	81	4	. .	4,743	2	5½ x7	230	8,855	250	9,625	240	9,240	260	10,010
. .	90	. .	14	104	6	3	1,158	3	6x7	195	8,190						
									5x3	176	2,640						
									6x6	185	†6,660						
. .	95	20	23	138	8	5	4,460	2	5¼ x6¼	280	9,240	300	9,900	290	9,570	300	9,000

* Bushels. † Not running only one week.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Average velocity of air current per minute at inlet.	Number of heading.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Bellview,	....	3	110	4,840	109	4,796	99	4,356	109	4,796
			95	4,085	113	4,859	121	5,687	146	6,278
Natrona,	....	3	....	....	..	....	...	....	....	..
Stewardson Furnace Mine,	...	1	80	3,600	96	4,320	100	4,500	104	4,680
Orangeville Shaft,	....	1	142	2,840	142	2,840	150	3,000	150	3,000
Pine Creek Furnace Mine,	....	6	....	....	....	....	....	..	....	....
Hickory Shaft,	....	1	....	4,900	...	4,700	....	4,800	....	3,950
Neshannock, No. 2,	....	4	190	3,800	200	4,000	210	4,200	220	4,400
Pancoast,	....	5	98	4,410	102	4,590	105	4,770	106	4,770
Barnes Mine,	....	....	160	4,800	200	6,000	200	6,000	200	6,000
Pardoe Mine,	....	2	100	3,000	120	3,600	120	3,600	120	3,600
Maple Grove Mine,	....	....	100	2,600	90	2,340	....	....	125	3,250
Philadelphia Mine,	....	2	....	....	....	....	....	....	....	....
Diamond Coal Works,	....	2	120	3,600	125	3,750	125	3,750	130	3,900
Monterey Mine,	....	1	75	2,700	75	2,700	100	3,600	...	....
Sligo Branch Coal Works,	....	....	....	....	....	....	....	....	....	....
Fairmount,	....	5	300	7,500	370	9,250	370	9,250	360	9,000
			210	5,250	280	7,000	240	6,000	270	6,750
			180	4,500	150	3,750	110	2,750	133	3,325
			110	2,750	100	2,500	90	2,250	100	2,500
			125	3,125	120	3,000	125	3,125	166	4,150
Stoneboro' Mine,	....	4	140	2,520	145	2,610	138	2,484	148	2,664
			135	2,129	140	2,205	145	2,283	140	2,205
			85	1,275	90	1,350	97	1,455	89	1,335
			180	2,860	185	2,960	190	3,040	189	2,992
Jackson Coal Mine,	....	3	270	6,682	300	7,425	280	6,930	270	6,682
Burnette,	....	....	85	3,570	80	3,360	75	3,150	90	3,780
Cannelton,	....	....	700	4,200	700	4,200	700	4,200	700	4,200
Wise Shaft,	....	2	109	1,962	159	2,782	148	2,590	148	2,590
			109	1,907	149	2,682	119	2,142	99	1,780
Mineral Ridge,	....	....	120	4,200	150	5,250	120	4,200	120	4,200
			120	4,200	120	4,200	75	2,625	85	2,975
			79	2,625	66	2,310	50	1,750	60	2,100
Red Bank Furnace Mine,	....	....	....	....	....	....	....	....	....	....
Oakland, No. 2,	....	2	120	3,180	315	4,866	345	3,278		
			200	3,630	345	3,087	320	2,864	360	8,164
Oakland, No. 3,	....	2	120	3,180	210	5,638	140	3,710	166	2,324
			200	3,630	135	3,674	220	3,977	241	4,579
Catfish Coal Works,	....	2	290	9,800	130	4,550	130	4,550	250	8,750
			230	8,050	120	4,200	150	5,250	160	5,600
Lower Hillville,	....	1	140	5,880	130	5,464	100	4,200	220	9,240
Home Bank,	....	....	199	7,600	220	8,800	220	8,800	245	9,800
Welsh Bank,	....	3	255	14,280	...	....	....	....	....	....
Beaver Mine,	....	....	60	1,605	80	2,140	70	1,871	80	2,140

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											REMARKS.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	59	322	18,998	308	18,172	308	18,172	327	19,293	. . . .	Allegheny county.
. . . .	75	90	6,750	40	3,000	120	9,000	120	9,000	. . .	Allegheny county.
. . . .	20	116	2,320	152	3,040	156	3,120	164	3,280	. . . .	Armstrong county.
. . .	4x4	360	5,760	360	5,760	350	5,400	340	4,800	. . . .	Mercer county.
. . . .	16	100	1,600	100	1,600	100	1,600	100	1,600	. . . .	Armstrong county.
. . . .	4x8	. . .	6,300	. .	6,100	. . .	6,250	. . .	5,650	. . . .	Mercer county.
. . . .	39	110	4,290	116	4,514	118	4,602	120	4,680	. . . .	Mercer county.
. . . .	8¼ x9	65	4,420	68	4,624	70	4,760	71	4,828	. . . .	Jefferson county.
. . . .	30	300	9,000	300	9,000	300	9,000	300	9,000	. . . .	Butler county.
. . . .	30	500	15,000	520	15,600	520	15,600	520	15,600	. . . .	Mercer county.
. . . .	27	425	11,475	460	12,420	. . .	. . . .	570	13,500	. . . .	Venango county.
. . . .	3x4	. . .	. .	. . . .	. . . . .	. . .	. . . .	400	4,800	. . . .	Venango county.
. . . .	5x5	70	1,750	75	1,875	75	1,875	80	2,000	. . . .	Jefferson county.
. . . .	3x3	75	2,700	50	1,600	75	2,700	. . .	. . . .	. . . .	Clarion county.
. . .	4x6	. . .	. . . .	. . . .	. . . . .	. . .	. . . .	157	3,768	. . . .	Clarion county.
. . . .	4x6	. .	. . . .		. . . .	. .	. . . .	81	1,941		
. . . .	25	300	7,500	370	9,250	370	9,250	360	9,000	. . . .	Clarion county.
. . . .	25	210	5,250	280	7,000	240	6,000	270	6,750		
. . . .	25	180	4,500	150	3,750	110	2,750	130	3,325	. . . .	Clarion county.
. . .	25	110	2,750	100	2,500	90	2,250	100	2,500		
. . . .	25	135	3,125	120	3,000	125	3,125	166	4,150		
. . . .	29	320	9,260	340	9,860	330	9,670	338	9,802	. . . .	Mercer county.
. . . .	19	250	4,750	260	4,940	255	4,845	258	5,002		
. . . .	5½ x4	328	7,224	334	7,356	333	7,324	330	7,268	. . . .	Mercer county.
. . . .	6x4	100	2,400	458	3,552	140	3,361	150	3,600	. . . .	Butler county.
. . . .	3x3	600	5,400	600	5,400	600	5,400	600	5,400	. . . .	Beaver county.
. . . .	7x3½	347	8,570	368	9,016	347	8,501	350	8,771	. . . .	Mercer county.
. . . .	5x5	150	3,750	120	3,000	150	3,750	150	5,750	. . . .	Clarion county.
. . . .	4x6	300	7,200	300	7,200	200	2,700	300	7,200		
. . . .	25	92	2,300	82	2,010	100	2,500	100	2,500	. . . .	Clarion county.
	27	104	2,808	96	2,592	76	2,050	87	2,349		
	16	89	1,427	55	880	61	970	105	1,850		
. . .	8′ 1′′ x 5′ 5′′	180	7,780	200	8,756	200	8,756	235	10,808	. . . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . . .	Mercer county.
. . . .	7x5	200	7,000	125	4,375	125	4,375	200	7,000	. . . .	Clarion county.
. . . .	7x5	160	5,600	130	4,550	150	5,250	150	5,250		
. . . .	7x5	200	7,000	220	7,700	150	5,250	350	12,250	. . . .	Clarion county.
. . . .	5x8	210	8,400	230	9,200	225	9,000	240	9,600	. . . .	Mercer county.
. . . .	6x6	345	12,420	. . .	. .	. . .	. . . .	. . .	. . . .	. . . .	Lawrence county.
. . . .	3⅔x5½	670	12,395	700	12,950	680	12,580	700	12,950	. . . .	Lawrence county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope, shaft, or drift.	Pumps—how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Bellview Mine, ...	P. Y. Hite, ...	Bituminous,	Drift, ...	1	1	10
Natrona, ...	Penn'a Salt Manufacturing Co., .	Bituminous,	Drift, ...	1	1	20
Stewardson Furn'e Mine,	. . . .	Bituminous,	Drift, ...	. .	. .	. .
Catfish, ...	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	. .	. .
Lower Hillville, ...	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift, ...	. .	. .	. .
Jackson Coal Mine, . . .	Jackson Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Barnes Mine, ...	M. M. & M. Co., ...	Bituminous,	Drift, ...	1	1	8
Pardoe Mine, ...	M. M. & M. Co., ...	Bituminous,	Drift, ...	2	. .	. .
Stoneboro', ...	Mercer Iron and Coal Company, .	Bituminous,	Slope, ...	. .	1	75
Pine Creek Furnace Mine	Brown & Mosgrove, ...	Bituminous,	Drift, ...	. .	. .	. .
Fairmount, ...	Fairmount Coal Company, ...	Bituminous,	Drift, ...	. .	. .	. .
Red Bank Furnace Mine,	Reynolds & Morehead, ...	Bituminous,	Drift, ...	. .	. .	. .
Oakland, No. 2, ...	Pierce & Frampton, ...	Bitum. block	Shaft, ...	2	1	. .
Oakland, No. 3, ...	Pierce & Scott, ...	Bitum. block	Shaft, ...	3	1	. .
Mineral Ridge, ...	T. J. Skidmore, ...	Bituminous,	Drift, ...	. .	. .	. .
Monterey, ...	J. McCollum, ...	Bituminous,	Drift, ...	. .	. .	. .
Orangeville Shaft, ...	Morris Coal Company, ...	Bitum. block	Shaft, ...	1	2	20 25
Wise Shaft, ...	Snyder Coal Company, ...	Bitum. block	Shaft, ...	2	1	40
Hickory Mine, ...	Spearman & Co., ...	Bitum. block	Shaft, ...	2	1	20
Pancoast, ...	Heim, Goodwill, & F. Williams,	Bituminous,	Drift, ...	. .	. .	. .
Bostonia Mine, ...	William Welsh, ...	Bituminous,	Drift, ...	. .	. .	. .
Philadelphia Mine, . . .	James Kennedy, ...	Bituminous,	Drift, ...	. .	. .	. .
Home Bank, ...	Buhl, Westerman & Co., ...	Bitum. block	Shaft, ...	1	1	50
Neshannock, No. 2, . . .	J. Phillips & Co., ...	Bitum. block	Shaft, ...	1	1	20
Sligo Branch Coal Works	Sligo Branch Coal Company, . . .	Bituminous,	Drift, ...	. .	. .	. .
Baker Bank, ...	D. C. Benham, ...	Bituminous.	Drift, ...	. .	. .	. .
Cannelton Mine, ...	I. F. Mansfield, ...	Bitum. can'l	Drift, ...	. .	. .	. .
Diamond, ...	Heim & Goodwill, ...	Bituminous,	Drift, ...	. .	. .	. .
Welsh Bank,*	Wampum Coal Company, ...	Bituminous,	Drift.			
Beaver Mine,*	Lee & Patterson, ...	Bituminous,	Drift.			

* Reported not running during month.

respective Collieries in the Second Bituminous Mine District of Pennsylva-
of November, 1878.

Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.									
										1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
								Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	74	4	10	88	7	. .	865	2	46	. . .	. . . .	. . .	. . . .	203	9,368	194	8,924
									50	. . .	. . . .	. . .	. . . .	161	8,050	145	7,250
1	30	5	10	45	9	1	*5,600	4	108	70	7,560	75	8,100	58	6,264	120	12,960
.	13	9	17	39	7	. .	1,344	2	24	152	3,648	160	3,840	140	3,450	152	3,648
. .	70	20	10	100	5	. .	3,310	3	7x5	300	10,500	250	8,750	260	9,100	210	7,350
									7x5	200	7,000	200	7,000	325	11,375	160	5,600
. .	32	3	3	38	3	. .	1,245	2	7½x6	160	7,200	250	11,250	300	13,500	150	6,750
. .	45	10	6	61	4	2	4,600	3	29¼	250	7,310	254	7,436	245	7,173	246	7,202
1	. . .	. .	. . .	. . .	6	3	4,800	13	36	300	10,800	200	7,200	200	7,200	220	7,920
									30	200	6,000	200	6,000	200	6,000	200	6,000
									20	200	4,000	200	4,000	200	4,000	200	4,000
									24	100	2,400	100	2,400	100	2,400	100	2,400
									18	100	1,800	100	1,800	100	1,800	90	1,520
									4	100	400	100	400	100	400	80	320
1	80	18	14	112	6	2	3,360	2	30	400	12,000	420	12,600	390	11,700	430	12,900
1	130	20	20	170	9	. .	6,757	3	32½	240	7,800	245	7,962	235	7,537	245	7,962
									27½	150	4,125	160	4,400	148	4,070	160	4,400
									14⅔	250	3,666	270	3,960	260	3,726	270	3,960
. .	16	7	. . .	23	4	3	*36,000	3	35	100	3,500	100	3,500	100	3,500	100	3,500
. .	56	2	2	60	10	1	4,013	3	36	200	7,200	190	6,870	120	4,320	110	3,960
									36	133	4,788	180	6,780	100	3,600	100	3,600
									36	120	4,320	300	10,800	250	9,000	200	7,200
. .	37	13	36	86	7	3	2,313	3	34	40	1,360	62	2,108	76	2,584	120	4,080
									34	85	2,890	73	2,482	124	4,216	85	2,890
									16	63	1,008	58	928	34	544	63	1,008
2	52	8	9	69	3	. .	2,682	2	6′ 9′′ x 5′ 6′′	220	8,166	190	7,052	180	6,681	190	7,052
4	46	4	8	58	3	. .	1,947										
. .	93	14	15	122	7	1	5,466	2	7x7	75	3,675	60	2,940	100	4,900	86	4,214
									5x5	200	5,000	300	7,500	75	1,875	150	3,750
. .	6	1	2	9	1	. .	144	2	36	100	3,600	75	2,700	100	3,600	100	3,600
2	38	14	20	72	2	4	1,784	2	4x4	355	5,680	365	5,840	370	5,920		
5	75	3	4	82	4	. .	6,000	2	7x6	155	6,540	194	8,184	199	8,358	233	9,786
3	37	3	13	53	3	. .	1,600	2	5x8	. . .	5,700	. . .	5,890	. . .	5,800	. . .	6,000
. .	28	8	4	40	3	. .	2,867	3	6x7	115	4,630	120	5,040	120	5,040	108	4,536
. .	23	4	6	33	2	. .	597	2	39								
. .	18	4	5	27	2	. .	605	2	4x5	. . .	. . . .	. . .	. . . .	. .	. . . .	180	3,600
5	47	17	8	72	4	. .	3,500	2	5½x7	300	11,550	280	10,780	250	9,625	280	10,780
4	38	2	8	48	2	. .	2,000	. .	5x12	80	4,800	90	5,400	120	7,200	110	6,600
. .	25	1	6	32	2	. .	788	2	6x6	103	3,708	120	4,320	111	3,996	81	2,916
									6x6	72	2,592	97	3,492	67	2,412	105	3,780
. .	80	20	15	115	7	1	8,200	2	6x7	250	10,750	250	10,750	250	10,750	250	10,750
. .	20	2	4	26	3	1	1,500	2	7x8	80	4,480	100	5,600	100	5,600	95	5,320
. .	30	4	. . .	34	3	. .	2,500	3	7x7	150	7,850	153	7,497	147	7,203	150	7,350

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* Bushels.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Bellview Mine,	....	....	....	....	....	....	108	5,608	99	5,049
							104	4,576	109	4,796
Natrona,	3	....	....	....	....	....	....	....	....	....
Stewardson Furnace Mine,	1	....	104	4,680	100	4,500	96	4,320	100	4,500
Catfish,	2	....	280	9,800	240	8,400	240	8,400	200	7,000
			180	6,300	180	6,300	300	10,500	150	5,250
Lower Hillville,	1	....	140	6,300	200	9,000	250	11,250	110	4,950
Jackson Coal Mine,	3	....	300	7,200	276	6,624	270	6,480	272	6,528
Barnes Mine,	4	....	200	6,000	200	6,000	190	5,700	210	6,300
Pardoe Mine,	3	....	....	....	....	....	....	....	....	....
Stoneboro',	4	....	150	2,800	160	2,960	155	2,867	170	3,145
			200	3,200	215	3,440	210	3,360	220	3,520
			300	5,400	280	5,040	310	5,580	300	4,500
			200	4,000	220	4,400	210	7,200	200	4,000
Pine Creek Furnace Mine,	6	....	....	....	....	....	....	....	....	....
Fairmount,	....	....	200	5,000	190	4,750	320	8,000	110	2,750
			180	4,500	200	5,000	120	3,000	100	2,500
			320	8,000	300	7,500	300	7,500	200	5,000
Red Bank Furnace Mine,	....	....	....	....	....	....	....	....	....	....
Oakland, No. 2,	2	....	330	4,632	410	6,252	400	6,100	390	5,447
			165	1,980	200	2,416	200	2,266	180	2,039
Oakland, No. 3,	2	....	200	4,024	180	3,621	215	3,655	210	3,570
			145	3,100	140	2,993	150	3,450	145	3,335
Mineral Ridge,	....	....	75	2,625	100	3,500	75	2,625	60	2,100
			75	2,625	75	2,625	60	2,100	50	1,750
			150	5,250	150	5,250	100	3,500	75	2,625
Monterey,	1	....	100	3.600	75	2,700	100	3,600	100	3,600
Orangeville Shaft,	1	....	130	3,570	135	3,645	140	3,780	....	....
Wise Shaft,	2	....	175	3,060	203	3,822	272	4,760	322	5,635
			146	3,504	213	5,112	223	5,352	302	7,248
Hickory Mine,	1	....	....	5,000	....	5,200	....	5,100	....	5,300
Pancoast,	5	....	95	4,275	100	4,500	100	4,500	88	3,960
Bostonia Mine,	....	....	....	....	....	....	....	....	....	....
Philadelphia Mine,	2	....	....	....	....	....	....	....	....	....
Home Bank,	....	....	220	8,800	210	8,400	200	8,000	225	9,000
Neshannock, No. 2,	....	....	196	3,920	200	4,000	220	4,400	210	4,200
Sligo Branch Coal Works,	....	....	....	....	....	....	....	....	....	....
Baker Bank,	8	....	200	7,200	200	7,200	200	7,200	200	7,200
Cannelton Mine,	....	....	700	4,200	200	4,200	700	4,200	700	4,200
Diamond,	2	....	125	3,750	120	3,600	123	3,690	130	3,900
Welsh Bank,*	....	....	....	....	....	....	....	....	....	....
Beaver Mine,*	....	....	....	....	....	....	....	....	....	....

* Reported not running during month.

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of current air per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
21	22	23	24	25	26	27	28	29	30	31	
. . . .	59	. . .	. . . .	. . .	. . .	334	19,706	318	19,262	. .	Allegheny county.
. . . .	75	65	4,875	80	6,000	65	4,875	120	9,000	. . . .	Allegheny county.
. . . .	20	156	3,120	164	3,280	144	2,880	160	3,200	. . . .	Armstrong county.
. . . .	7x5	200	7,000	160	5,600	250	8,750	160	5,600	. . . .	Clarion county.
	7x5	160	5,600	150	5,250	200	7,000	150	5,250		
. . . .	7x5	200	7,000	325	11,375	425	14,875	190	6,650	. . . .	Clarion county.
. . . .	24	310	7,440	312	7,488	295	7,080	300	7,200	. . .	Mercer county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. .	. . .	Butler county.
. . . .	30	430	12,900	500	15,000	400	12,000	500	15,000	. . .	Mercer county.
	21¼	450	9,600	460	9,720	430	9,137	450	9,600	. . . .	Mercer county.
	17	440	7,480	420	7,140	410	6,970	440	7,480		
. . . .	16	100	1,600	100	1,600	100	1,600	100	1,600	. . .	Armstrong county.
. . . .	25	200	5,000	190	4,750	320	8,000	110	2,700	. . .	Clarion county.
	25	180	4,500	200	5,000	120	3,000	100	2,500		
	25	320	8,000	300	7,500	300	7,500	200	5,000		
. . . .	25	64	1,600	46	1,150	108	2,700	94	2,350	. . .	Clarion county.
	27	76	2,052	67	1,809	87	1,349	85	2,295		
	16	45	720	54	864	96	1,556	60	960		
. . .	8′ 1″ x 5′ 5″	210	9,175	235	10,269	230	10,228	235	10,449	. . . .	Mercer county.
. . . .	. .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	Mercer county.
. . . .	5x5	300	7,500	300	7,500	300	7,000	200	5,000	. . . .	Clarion county.
	4x6	120	2,880	150	3,600	150	3,600	120	2,880		
. . . .	36	75	2,700	50	1,800	75	2,700	75	2,700	. . . .	Clarion county.
. . . .	4x4	340	5,440	350	5,600	350	5,600		. . .	. . . .	Mercer county.
. . . .	7¼x3½	352	8,624	370	9,065	372	9,114	400	9,800	. . .	Mercer county.
. . . .	4x8	. . .	6,280	. . .	6,400	. . .	6,300	. . .	6,700	. . . .	Mercer county.
. . . .	8x5¼	67	4,492	65	4,940	68	5,118	48	4,578	. . . .	Jefferson county.
. . . .	. . .	. .	. . . .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	Armstrong county.
. . . .	3x4	. . .	. .	. .	. . . .	. . .	. . . .	300	3,600	. . . .	Venango county.
. . . .	5x8	250	10,000	240	9,600	220	8,800	260	10,400	. . . .	Mercer county.
. . .	38	115	4,485	122	4,758	152	5,928	140	5,460	. . . .	Mercer county.
. . . .	6x6	103	3,708	120	4,320	111	3,996	81	2.916	. . . .	Clarion county.
	4x6	180	4.320	207	4,568	178	4,272	220	5,880		
. . . .	6x6	450	16,200	450	16 200	450	16,200	450	16,200	. . .	Beaver county.
. . . .	3x3	600	5,400	600	5,400	600	5,400	600	5,400	. . . .	Beaver county.
. . . .	5x5	100	2,500	95	2,375	93	2,325	95	2,375	. . . .	Jefferson county.
. . . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Lawrence county.
. . . .	. . .	. .	. . . .	. . .	. . . .	. .	. . . .	. . .	. . . .	. . .	Lawrence county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous, or semi-bituminous.	Slope, shaft, or drift.	Pumps how many.	Number of engines.	Horse power.
1	2	3	4	5	6	7
Belleview Mine,	P. Y. Hite,	Bituminous,	Drift,	1	1	10
Natrona Mine,	Pennsylvania Salt Manuf'g Co.,	Bituminous,	Drift,	1	1	20
Stewardson Furn. Mine,	F. B. & A. Laughlin,	Bituminous,	Drift,	. .	. .	. .
Welsh Bank,	Wampum Coal Company,	Bituminous,	Drift,	. .	. .	. .
Catfish Coal Mine,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	. .	. .	. .
Lower Hillville Mine,	Pittsburgh Coal and Mining Co.,	Bituminous,	Drift,	.	. .	. .
Wise Shaft,	Snyder Coal Company,	Bituminous,	Shaft,	2	1	40
Hickory Mine,	Spearman & Co.,	Bitu. Block,	Shaft,	2	1	20
Orangeville Shaft,	Morris Coal Company,	Bitu. Block,	Shaft,	1	2	20 25
Pine Creek Furn. Mine,	Brown & Mosgrove,	Bituminous,	Drift,	. .	. .	. .
Jackson Coal Mine,	Jackson Coal Company,	Bituminous,	Drift,	. .	. .	. .
Neshannock, No. 2,	J. Phillips & Co.,	Bitu. Block,	Shaft,	1	1	20
Pancoast Coal Mine,	Heim, Goodwill & F. Williams,	Bituminous,	Drift,	. .	. .	.
Stoneboro' Mine,	Mercer Iron and Coal Company,	Bituminous,	Slope,	.	1	75
Pardoe Mine,	M. M. and M. Company,	Bituminous,	Drift,	2	. .	. .
Barnes Mine,	M. M. and M. Company,	Bituminous,	Drift,	2	1	8
Cannelton Mine,	I. F. Mansfield,	Bit. Cannel,	Drift,	. .	. .	. .
Mineral Ridge Coal Mine,	T. J. Skidmore,	Bituminous,	Drift,	.	. .	. .
Sligo Branch Coal W'ks,	Sligo Branch Coal Company,	Bituminous,	Drift,	. .	. .	. .
Pacific Slope Mine,	Dunham, Roberts & Co.,	Bitu. Block,	Slope,	3	1	40
Baker Bank,	D. C. Benham,	Bituminous,	Drift,	. .	. .	. .
Philadelphia Mine,	James Kennedy,	Bituminous,	Drift,	. .	. .	. .
	W. Welsh,	Bituminous,	Drift,	. .	. .	. .
Diamond Coal Mine,	Diamond Coal Company,	Bituminous,	Drift,	.	. .	. .
Red Bank Furnace Mine,	Reynolds & Morehead,	Bituminous,	Drift.			
Fairmount Coal Mine,	Fairmount Coal Company,	Bituminous,	Drift,	. .	. .	. .
Fairmount Coal Mine,	Fairmount Coal Company,	Bituminous,	. . . .	. .	. .	. .
Oakland, No. 2,	Pierce, Frampton & Co.,	Bitu. Block,	Shaft,	2	1	. .
Oakland, No. 3,	. . . .	Bitu. Block,	Shaft,	3	1	. .
Beaver Mine,	Lee & Patterson,	Bituminous,	Drift,	. .	. .	. .
Home Bank, No. 1,	Buhl, Westerman & Co.,	Bitu. Block,	Shaft,	1	1	50
Home Bank, No. 2,	Buhl, Westerman & Co.,	Bitu. Block,	Shaft,	1	1	25
Maple Grove Mine,	S. P. McCalmont,	Bituminous,	Drift,	. .	. .	. .

respective Collieries in the Second Bituminous Mine District of Pennsyl-
of December, 1878.

								VENTILATION.									
										1ST WEEK.		2D WEEK		3D WEEK.		4TH WEEK.	
Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	8	9	10
1	84	3	11	98	8	. .	3,750	2	46	213	9,828	251	11,546	185	8,510	176	8,906
									50	191	9,700	137	6,850	174	8,700	171	8,550
1	34	5	10	49	9	1	*68,200	4	108	20	2,160	73	7,884	70	7,560	35	3,780
. .	13	9	16	38	8	. .	1,237	2	24	192	4,608	152	3 648	192	4,608	212	5.088
. .	30	8	. .	38	3	2	700	3	6x7	200	8,400	195	8,190	205	8,610	190	7,880
									5x3	190	2,850	185	2,775	195	2,925	170	2,550
									6x6	180	6,480	170	6,120	165	5,940	190	6,840
.	75	25	10	110	. .	.	3,100	2	7x5	200	7,000	300	10,500	150	5,250	300	10,500
									7x5	300	10,500	250	8,750	200	7,000	200	7,000
.	40	4	3	47	3	. .	1,460	2	7x6	150	2,250	200	9,000	160	7,200	250	11,250
5	72	4	6	82	4	. .	2,000	2	6x7	235	9,870	230	9,660	250	10,500	255	10,710
3	24	3	14	51	3	. .	1,700	2	5x8	145	5,800	150	6,000	182½	6,900	175	7,000
2	43	14	19	76	3	4	1,743	2	4x4	370	5,920	375	6,000	365	5,840	375	6,000
. .	18	6	. . .	24	4	3	*36,000	3	35	100	3,500	100	3,500	100	3,500	100	3,500
. .	56	6	6	68	5	2	2,000	3	5′2″ x 5′8″	300	8,783	310	9,076	340	9,367	350	9,662
4	. . .	. .	. . .	.	. .	. .	. .	. .	5x12	110	6,600	130	7,800	140	8,400	120	7,200
.	22	5	6	33	3	. .	1.846	3	6x7	100	4,200	115	4,830	115	4,830	115	4,830
1	135	20	20	175	9	. .	6,541	3	32½	235	7,637	240	7,800	235	7,637	245	7,962
									27½	170	4,675	175	4,812	170	4,675	180	4,950
									11	300	4,200	320	4,480	310	4,340	320	4,480
1	74	12	10	96	8	2	3,267	2	30	360	10,800	380	11,400	400	12,000	400	12,000
1	80	14	13	112	7	3	4,068	14	36								
									30								
									20								
. .	20	2	4	26	1	1	1,100	2	7x8	90	5,040	90	5,040	90	5,040	80	4,480
. .	110	18	15	142	7	1	4,940	3	7x7	200	7,800	200	9,800	150	7,350	300	14,700
									5x5	100	2,500	150	3,750	100	2,500	300	7,500
									5x5	300	7,500	150	3,750	150	3,750	200	5,000
. .	23	.	6	29	2	. .	750	2	6x6	77	2,772	50	1,800	91	3,286	82	2,952
									6x6	51	1,836	60	2.160	47	1,692	77	2,772
2	40	16	23	79	4	. .	2,210	3	7x6	335	8,5 7	395	10 072	385	9,817	3 5	8,287
. .	80	20	16	116	8	. .	4,000	2	6x7	300	12,600	300	12,600	300	12,600	300	12,300
. .	20	4	5	29	2	.	578	2	4x5	. . .	. . . .	. . .	. . . .	. .	. .	220	4,400
.	18	5	3	26	1	1	518	2	45	100	4,500	100	4,500	75	3,375	75	3,375
. .	28	3	. . .	31	3	. .	1,500	3	7x7	165	8,085	160	7,840	163	7,987	165	8,085
. .	60	2	2	64	10	1	3,918	5	36	300	10,800	260	9,360	250	9,000	220	7,920
									36	200	7,200	190	6,840	180	6,480	150	5,400
. .	. . .	. .	. . .	. . .	. .	. .	. . . .	.	36	100	3,600	90	3,240	100	3,600	90	3,240
									36	150	5,400	125	4,500	120	4,320	120	4,320
									36	200	7,200	250	9,000	250	9,000	200	7,560
2	40	6	4	50	3		1,907	2	5¾x5½	500	15,813	230	8,537	450	14,229	400	12,650
4	12	3	. . .	15	1	. .	. . . .	.	5′ 0″ x 5′ 10″	200	4,070	180	3,621	215	3,655	185	3,535
. .	98	10	22	130	8	5	3,500	2	5⅛x6	275	9,075	300	9,900	280	9,240	275	9,075
5	51	13	7	71	4	. .	2,400	2	5⅛x7	3 0	11,935	3 5	11,742	250	9,655	280	10,780
2	8	. .	5	13	1	. .	211	.	5x9	130	5,850	125	5,626	140	6,308	140	6,308
. .	22	3	9	34	2	. .	860	2	6x6	170	6,120	135	4,860	120	4,320	125	4,500

* Bushels.

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.									
			1ST WEEK		2D WEEK.		3D WEEK.		4TH WEEK.	
	Number of headings.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	11	12	13	14	15	16	17	18	19	20
Belleview Mine,	2	....	118	5,792	137	6,028	133	5,852	127	5,588
			109	5,559	123	6,273	127	6,537	123	6,273
Natrona Mine,	3	....	....	....	....	....	....	....	....	....
Stewardson Furnace Mine,	1	....	104	4,680	112	5,040	120	5,400	125	5,625
Welsh Bank,	3	....	270	15,120	260	14,560	270	15,120	256	14,840
Catfish Coal Mine,	1	....	180	6,100	280	9,800	130	4,550	280	9,800
			280	9,800	100	7,000	280	9,800	180	6,100
Lower Hillville Mine,	1	....	140	4,900	180	6,100	150	5,250	220	7,700
Wise Shaft,	2	....	325	5,687	320	5,600	340	5,950	340	5,950
			300	5,400	300	5,400	330	5,940	325	5,850
Hickory Mine,	2	..	159	5,100	164	5,250	186½	6,000	203	6,500
Orangeville Shaft,	1	....	260	5,200	265	5,300	260	5,200	265	5,300
Pine Creek Furnace Mine,	6	....	....	....	....	....	....	....	....	....
Jackson Coal Mine,	....	....	350	8,662	330	8,167	340	8,415	360	8,910
Neshannock, No. 2,	4	....	210	4,200	220	4,400	240	4,800	230	4,600
Pancoast Coal Mine,	6	....	80	3.600	90	4,050	90	4,090	90	4,050
Stoneboro' Mine,	4	....	300	5,400	310	5,580	300	5,400	310	5,580
			200	4,000	200	4,000	210	4,200	220	4,400
			100	2,400	110	2,640	100	2,400	110	2,640
			200	4,000	210	4,200	220	4,400	220	4,400
Pardoe Mine,	3	....	....	....	....	....	....	....	..	....
Barnes Mine,	3	....	160	4,800	160	4,800	180	5,400	200	6,000
Cannelton Mine,	1	....	700	4,200	700	4,200	700	4,200	650	3,900
Mineral Ridge Coal Mine,	4	....	150	5,250	100	3,500	75	2,625	200	7,000
			75	2,625	75	2,625	50	1,750	100	3,500
			50	1.750	50	1,750	100	3,500	120	4,200
			50	1,750	75	2,625	150	5,250	150	5,200
Sligo Branch Coal Works,	....	....	....	....	..	....	....	....	....	....
Pacific Slope Mine,	4	....	70	2,450	70	2,450	75	2,625	65	2,275
Baker Bank,	4	....	250	9,000	250	9,000	250	9,000	250	9,000
Philadelphia Mine,	2	...	....	..	....	....	..	....	....	....
W. Welsh,	2	....	110	4,950	114	5,130	84	3,780	110	4,950
Diamond Coal Mine,	2	....	160	4,800	157	4,710	155	4,650	158	4,740
Red Bank Furnace Mine,	....	....	....	....	..	....	....		....	...
Fairmount Coal Mine,	5	....	333	8,325	300	7,500	333	8,325	175	4,375
			220	5,500	200	5,000	133	3,325	200	5,000
Fairmount Coal Mine,	....	...	100	2,500	90	2,250	120	3,000	133	3,325
			200	5,000	180	4,500	170	4,250	150	3,750
			260	6,500	210	5,250	260	6,500	300	7,500
Oakland, No. 2,	....	....	450	5,400	140	5,635	430	5,160	400	4,800
			200	2,500	160	2,000	235	2,937	300	2,700
Oakland, No. 3,	....	....	....	....	....	....	....	....	....	....
Beaver Mine,	....	....	110	2,941	120	3 250	100	2,675	130	3,476
Home Bank, No. 1,	....	....	240	9,600	240	9,600	235	9,400	250	10,000
Home Bank, No. 2,	....	....	305	6,100	300	6,000	310	6,200	305	6,100
Maple Grove Mine,	2	....	100	2,600	90	2,340	125	3,250	110	2,860
			65	1,850	60	1,680	75	2,100	80	2,240

Collieries in the Second Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
21	22	23	24	25	26	27	28	29	30	31	
. . . .	59	342	20,178	360	21,240	394	23,246	372	21,948	. . . .	Allegheny county.
. . . .	75	140	10,500	50	3,750	85	6,375	110	8,250	. . . .	Allegheny county.
. . . .	20	196	3,920	156	3,120	196	3,920	216	4,320	. . .	Armstrong county.
. . . .	6x6	365	13,140	340	12,240	370	13,320	350	12,600	. . . .	Lawrence county.
. . . .	7x5	160	5,600	150	5,250	125	4.375	200	7,000	. . . .	Clarion county.
. . . .	7x5	200	7,000	160	5,600	150	5,250	150	5,250		
. . . .	7x5	200	7,000	300	10,500	250	8,750	375	13,125	. . . .	Clarion county.
. . . .	7x3⅛	450	11,025	410	10,045	460	11,270	468	11,496	. . . .	Mercer county.
. . . .	4x8	200	6,400	206	6,600	2 8	7,000	231	7,500	. . .	Mercer county.
. . .	4x4	350	5,600	355	5,680	350	5,600	355	5,680	. . .	Mercer county.
. . . .	16	100	1,600	100	1,600	100	1,600	100	1,600	. . . .	Armstrong county.
. . . .	5½x1½	350	8,662	330	8,167	340	8,415	360	8,910	. . . .	Mercer county.
. . . .	39	120	4,680	122	4,758	160	6,240	140	5,460	. . . .	Mercer county.
. . .	8⅛x9	55	4,180	61	4,864	61	4,864	61	4,861	. . . .	Jefferson county.
. . . .	21	450	9,600	460	9,813	450	9,600	400	8,533	. . . .	Mercer county.
. . . .	17	460	7,650	470	7.990	445	7,565	450	7,650		
. . . .	36	350	12,600	360	12,960	360	12,960	380	13,680	. . .	Mercer county.
. . . .	50	300	15,000	320	16,000	320	16,000	300	15,000	. . . .	Butler county.
. . . .	3x3	500	4,500	500	4,500	500	4,500	480	4,320	. . . .	Beaver county.
. . . .	5x5	250	6,250	200	5,000	350	8,750	600	15,000	. . . .	Clarion county.
. . . .	4x6	120	2,880	150	3,600	100	2,400	300	7,200		
. . . .	6x6	77	2,772	50	1,800	91	3,286	82	2.952	. . . .	Clarion county.
	6x6	152	5,472	130	4,680	100	3,600	160	5,760		
. . . .	4½x4¾	340	6,740	315	6,370	275	7,012	250	5,416	. . . .	Mercer county.
. . . .	6x6	500	18,000	500	18,000	500	18,000	500	18,000	. . . .	Beaver county.
. . . .	3x4		. . . .	. .	. . . .	. . .	. .	450	5,400	. . . .	Venango county.
. . . .	45	75	3,375	100	4,500	75	3,375	75	3,375	. . . .	Armstrong county.
. . . .	5x5	120	2,900	123	3,075	125	3,125	128	3,200	. . . .	Jefferson county.
. . . .	. . .	. . .	. .	. .	.	. . .	. . . .	. .	. . . .	. . . .	Clarion county.
. . . .	25	333	8,325	300	7,500	333	8,325	175	4,375	. . . .	Clarion county.
. . . .	25	220	5,500	200	5,000	113	3,335	200	5,000		
. . . .	25	100	2,500	90	2,450	120	3,000	133	3,325	. . . .	Clarion county.
. . . .	25	200	5,000	180	4,500	170	4,250	150	3,750		
. . . .	25	260	6,500	210	5,250	260	6,500	300	7,500		
. . . . . .	8′ 1′′ x 5′ 5′′	3 5	13,352	230	10,069	300	13,134	300	12,200	. . . .	Mercer county.
. . .	5′ 4′′ x 5′ 7′′	160	3,057	155	2,962	165	3,115	170	3,219	. . . .	Mercer county.
. . . .	3¼x5¼	700	12,950	725	13,412	650	12.025	680	12,580	. . . .	Lawrence county.
. . . .	5x8	260	10,400	265	10,600	250	10,000	270	10,800	. . .	Mercer county.
. . . .	5x7	155	5,425	150	5,250	160	5,600	160	5,600	. . . .	Mercer county.
. . . .	5x5	480	12,000	425	11,125	400	10,000	325	8,125	. . . .	Venango county.

TABLE *showing list of Collieries, &c., in the Second*

NAME OF COLLIERY.	WHERE LOCATED.
Red Bank Furnace Mine,	Clarion county,
Stewardson Furnace Mine,	Armstrong county,
Mineral Ridge Coal Mine,	On A. V. Railroad, at West Monterey, Clarion county,
Reimerton Coal Works,	On A. V. Railroad, at Reimerton Station,
Mahoning Coal Works,	On A. V. Railroad, at Mahoning Station,
Sligo Branch Coal Works,	On Sligo Branch of A. V. Railroad,
Fairmount Coal Mine,	Low Grade Division of A. V. Railroad,
Mahoning Furnace Mine,	Mahoning Creek,
Home Bank,	Four miles south-east of Sharon,
Oakland Shaft, No. 1,	Six miles south-east of Sharon,
Oakland Shaft, No. 2,	Near No. 1 Shaft,
Keel Ridge, No. 3,	Keel Ridge, Mercer county,
Neshannock Mine,	Neshannock,
Hickory Mine,	Hickory township, Mercer county,
Bethel Shaft, No. 1,	Bethel, Mercer county,
Bethel Shaft, No. 2,	Sampletown,
Pacific Slope,	Near Sharon,
Orangeville Shaft,	About five miles west of Greenville,
Pine Creek Furnace Mine,	Four miles from Pine Creek Station, A. V. Railroad,
Natrona Mine,	On the West Pennsylvania Railroad,
Catfish Mine,	Catfish Station, A. V. Railroad, Clarion county,
Lower Hillville,	Lower Hillville Station A. V. Railroad, Clarion county,
Monterey Mines,	About a mile above Monterey Station, A. V. Railroad,
Belleview Mine,	On the West Pennsylvania Railroad, Allegheny county,
Vesuvius Mine,	On the West Pennsylvania Railroad, Allegheny county,
Cannelton Mine,	Cannelton, Beaver county,
Beaver Coal Mine,	Near Clinton Station, P. and E. R. R., Lawrence county,
Clinton Mine,	Near Clinton Station, P. and E. R. R., Lawrence county,
Welsh Bank,	Near Wampum, Lawrence county,
Wallace Coal Bank,	Two and a half miles west of New Castle,
Shoaf Mine,	North-east of New Castle, Lawrence county,
Parson & Bell Mine,	Four miles north-east of New Castle, Lawrence county,
Davidson Coal Mine,	Near Wampum, Lawrence county,
Rocky Bend Mine,	Fuller Station, Low Grade Division, A. V. Railroad,
Pancoast Mine,	Pancoast Station, Low Grade Division, A. V. Railroad,
Washington,	One mile east of Pancoast Station,
Diamond Coal Works,	Near Reynoldsville, Jefferson county,
Burnette Mine,	Shenango and Allegheny Railroad, Burnette Station,
Barnes' Mine,	Shenango and Allegheny Railroad, Harrisville Station,
Pardoe Mine.	Shenango and Allegheny Railroad, Pardoe Station,
Jackson Center Mine,	At Jackson Center, Mercer county,
Stoneboro' Mine,	At Stoneboro', on the N. C. and Franklin Railroad,
Maple Grove Mine,	Near Raymilton, Venango county,
Clarion Mine,	Near Clarion, Clarion county,
Cranberry Mine,	Terminus of Oil City and Ridgeway Railroad,
Baker Bank,	Clinton, Beaver county,
Karnes City Coal Mine,	Near Karnes City, Butler county,
Red Bank Colliery,	In Armstrong county,
Hamilton Coal Mine,	In Jefferson county,

Bituminous Coal District of Pennsylvania.

NAME OF COMPANY.	NAME OF SUPERINTENDENT.	POST OFFICE ADDRESS.
Reynolds & Morehead,	David Reynolds,	Red Bank Furnace P. O.
F. B. & A. Laughlin,	A. Laughlin,	Mahoning P. O., Armstrong co.
T. J. Skidmore,	C. W. H. Eike,	West Monterey, Clarion co.
E. J. Bowen,	E. J. Bowen,	Reimerton P. O., Armstrong co.
Mahoning Coal Company,	Jas. B. Stephenson,	Mahoning P. O., Armstrong co.
Sligo Branch Coal Company, (limited,)	Samuel Coon,	Rimersburg, Clarion co.
Fairmount Coal Company,	J. M. Brinker,	New Bethlehem, Clarion co.
J. A. Colwell & Co.,	Henry Colwell,	Oakland P. O., Armstrong co.
Buhl, Westerman & Co.,	F. Buhl,	Sharon, Mercer co.
Pierce & Sroot,	Walter Pierce,	Sharpsville, Mercer co.
Pierce & Frampton,	Walter Pierce,	Sharpsville, Mercer co.
Filer & Co.,	Enoch Filer,	Pleasant P. O., Mercer co.
J. Phillips & Co.,	J. Phillips,	Neshannock, Mercer co.
Spearman, Ulp & Co.,	J. J. Spearman,	Sharon, Mercer co.
Brthel Coal Company,	E. A. Wheeler,	Sharon, Mercer co.
Bethel Coal Company,	E. A. Wheeler,	Sharon, Mercer co.
Dunham, Roberts & Co.,	W. B. Donham,	Sharon, Mercer co.
Morris Coal Company,	George Frack,	Orangeville, Ohio.
Brown & Musgrove,	J. P. Painter,	Pine Creek Furnace P. O.
Pennsylvania Salt Manufacturing Company,	W. H. Richards,	Natrona, Allegheny co.
Pittsburgh Coal and Mining Company,	W. D. Mullin,	Catfish P. O., Clarion co.
Pittsburgh Coal and Mining Company,	W. D. Mullin,	Catfish P. O., Clarion co.
John McCollum,	John McCollum,	Oil City, Venango co.
P. Y. Hite,	P. Y. Hite,	Hite P. O., Allegheny co.
Lewis Dalzell & Co., and Spang, Chalfant & Co.,	Hugh Wood,	Hite P. O., Allegheny co.
I. F. Mansfield,	I. F. Mansfield,	Cannelton P. O., Beaver co.
Lee & Patterson,	W. W. Hamilton,	Rock Point, Beaver co.
Clinton Coal Company,	Charles Harmony,	Rock Point P. O., Beaver co.
Wampum Furnace Company,	John McCleery,	Wampum P. O., Lawrence co.
Sharpless & Kincaid,	M. C. Sharpless,	New Castle, Lawrence co.
Bay, Shoaff, Spears & Co.,	George Shoaff,	New Castle, Lawrence co.
Parson, Bell & Co.,	Thomas Bell,	New Castle, Lawrence co.
Davidson, Green & Co.,	J. M. Davidson,	Wampum, Lawrence co.
Talbot, Molton & Adams,		Fuller P. O., Jefferson co.
Helms, Goodwill & F. Williams,	Henry Williams,	Pancoast P. O., Jefferson co.
Frank Williams,	Henry Williams,	Pancoast P. O., Jefferson co.
Helms, Goodwill & Co.,	John Goodwill,	Reynoldsville, Jefferson co.
Andrew Burnette,	A. Burnette,	Hillards P. O., Butler co.
Mercer Mining and Manufacturing Company,	F. H. Oliphant,	Pardoe P. O., Mercer co.
Mercer Mining and Manufacturing Company,	F. H. Oliphant,	Pardoe P. O., Mercer co.
Jackson Coal Company,	J. P. Kerr,	Jackson Center, Mercer co.
Mercer Iron and Coal Company,	B. F. Esgar,	Stoneboro', Mercer co.
S. P. McCalmont,	Charles A. Kinney,	Raymilton P. O., Venango co.
Clarion Coal Company,	W. W. Greenland,	Clarion, Clarion co.
Cranberry Coal Comp'y, (Jas. Kennedy, lessee,)	James Kennedy,	South Oil City, Venango co.
D. C. Benham, for Scott & Co.,	D. C. Benham,	Rock Point, Beaver co.
H. R. Fullerton,	Wm. Penberthy,	Karnes City P. O., Butler co.
William Welsh, lessee,	William Welsh,	New Bethlehem, Clarion co.
Hamilton Coal Company,	J. D. Lowther,	Reynoldsville, Jefferson co.

THIRD DISTRICT—William L. Richards, Inspector.

To the Honorable WILLIAM McCANDLESS,
Secretary of Internal Affairs:

SIR: I have the honor to present herewith my second annual report for the third bituminous coal district of Pennsylvania, comprising the counties of Cambria, Blair, Huntingdon, Centre, Clearfield, Elk, Cameron, McKean, Potter, Clinton, Lycoming, and Bradford.

In presenting my second annual report, I have endeavored to gather such items of interest as would benefit those engaged in mining.

The sharp competition that is now going on between bituminous coal operators to get coal in the market at the lowest possible rate, is alike ruinous to the mine that is worked, and a loss to both operator and miner. That some of our mines are being ruined, is evident from the reckless mode in which they are being worked to get cheap coal. The instructions are to the superintendent, give us cheap coal or we must stop. The result is, in his endeavor to get cheap coal, he stops all parts of mine work where money is to be expended; drains that should be kept open are left to fill up; bottom and top that should be blasted is left undone; air-ways that should be driven are postponed; pillars are mined out that should be left standing; and all the available force concentrated on the coal opened up; no new work being opened out. That such a state of things cannot last long is evident. A company getting coal under such circumstances will eventually pay dear for it. They will find, when it is too late, a ruined mine, and most of the work will have to be re-opened; drains will have to be cleaned out; air-ways will have to be driven; bottom and top to be blasted; new roads to be laid; in fact, expenses will meet them at every turn they make in and out of the mine. Such is the condition, I am sorry to say, of too many of our bituminous mines at the present writing. It is with pleasure I find some of our companies conducting their mines on a true basis. Their mines are kept in good order, all the details inside and outside are attended to, every thing is kept as it should be, so that if the price of coal should rise, and an immedate demand for coal be made, they would be ready for the emergency. Their works are well opened, and in readiness for large shipments. Such a company and superintendent thoroughly understand the business of mining, and success will always crown their efforts. In such mines, I find little difficulty in making arrangements to have the mine well drained and thoroughly ventilated.

I would again suggest to the bituminous coal companies, that they employ none but competent men as superintendents to take charge of their mines. Superintendents should at least have some knowledge of scientific mining, and make mines and mining their special study. They should bring to their aid the best thoughts of the best minds on the subject of mining, both in Europe and America, and should have on their table the best mining journals of both countries. They should be well informed as to all the latest improvements and best plans; and should be thoroughly acquainted with the most improved method of ventilating and draining a mine, and also make the most economical mode of working a mine, a special study. In fact, they must make mining a specialty, and give it their undivided attention. I would also call attention to the fact, that I have too often found incompetent men in charge of the inside department, acting as inside bosses, and being a source of trouble to the inspector, as he finds great difficulty in many cases, in having his instruction understood so as to be carried out intelligently.

The sooner our coal operators discover the fact that to work their mines successfully, economically, and with profit, they employ competent men to act as superintendents and inside bosses the better. For if there is any business in which capital is invested that requires good management, it is the business of mining coal. Many mines in this State are now standing monuments of mis-directed labor; but the worst feature of such management is the sacrifice of human life. The miner is compelled to work in a poorly drained and badly ventilated mine until his health is shattered by breathing impure air. Ventilation stands above all other considerations in mining. A mine to be properly worked must be thoroughly ventilated. Hyslop, the English mining engineer and author of several works on mining, states that a manager that cannot ventilate a mine thoroughly is an unfit person for the position.

More has been written on ventilation than on any other department of mining, and yet in the face of these facts we find managers of mines who think that the ventilation of a mine is a secondary consideration, but under a competent manager we find a different state of things. Ventilation is the first consideration. Air-ways are well kept up. Drains in good order. Roads clean and kept in repair. Rooms or breasts are worked on the most improved plan. Headings are planned and laid out so that no unnecessary headings are driven. The mine, in general, shows an effort to keep up with the progress of the age, the result is the men are more contented, having what the Creator designed, they should have pure air to breath while they are working. By having the roads clean and in good repair, more coal can be hauled out in a given time with less mule or horse power than could otherwise be done. While on the subject of underground haulage, I find a large number of bituminous coal operators are turning their attention to the subject, and endeavoring to find a cheaper and more reliable mode than the present now in use. The locomotive is now being used in the bituminous mines of this State, and, as it affects the ventilation of the mine, it would not be out of place to point out some of the advantages and disadvantages of the different modes now used for hauling coal and other mineral under ground.

The introduction of the locomotive that uses coal, coke, or charcoal, for generating steam is attended with more or less danger to the miner and those employed on or about the engine. The gases given off by the combustion of the fuel, if not carried off by thorough ventilation, will cause death in many instances by being inhaled. Therefor the introduction of a locomotive into a mine will require a careful supervision by the superintendent and inside boss. (Several coal companies in my district introduced the locomotive into their mine at a cost of several thousand dollars, and after repeated trials gave it up, not wishing to endanger the lives of their men.) The ventilation of that part of the mine where the engine is running must be perfect, or the risk is very great.

There are other motive powers now largely used, such as a compressed air locomotive, the tail and main rope, also the endless wire rope, with stationary engines. Mining engineers in Europe and scientific men of this country are reviving the use of compressed air as a motive power. In Belgium, compressed air is used for hoisting out of deep pits. English mining engineers have long since given their opinion that locomotives for under-ground hauling, that use coal or coke for fuel, are too dangerous. We, therefore, find them using stationary engines and wire ropes, and are now reviving the use of the compressed air locomotive for under-ground haulage. At Pensher Colliery, England, a compressed air locomotive is in use, and from repeated trials has been found to work successfully. And it is the opinion of experts, that it will be found to work to great advantage in mine haulage. Several are now in use with practical results in the Great St. Gothard Tunnel, now being put through the Alps, connecting Germany and Switzerland with Italy. Here it is found doing herculean work, hauling hundreds of tons of rock each day. Mr. Louis Favre, the contractor, has given the air locomotive a long trial, and found in every particular, they worked successfully. That they would fill all the requirements necessary for hauling coal under-ground, there is not the least doubt. No dangerous gases are generated. No steam or smoke is given off. On the other hand, the exhaust gives off pure air, and the engine will ventilate the road that it runs on. The question arising before our coal managers is, *will it pay.* If our mining engineers can solve the question asked, and reduce the expense of a compressed air locomotive, and place it on an equal footing with the steam one, so far as dollars and cents are concerned, no manager of a coal mine would hesitate a moment as to the choice.

Other modes of haulage are used, such as the stationary engine, with endless and tail ropes. The latter is very little used in this country; but is almost universally adopted by the mining engineers of Great Britain. In that country, underground haulage by stationary engine and wire rope is brought almost to perfection. Their engineers have experimented and tested, and every part is so perfected, it seems as though underground haulage by rope is as perfect as human skill can make it. Our American mining engineers have not given the subject of mine haulage that attention it deserves. Any one looking over the figures will be surprised at the low rate of haulage in Great Britain, when we take into consideration the deep pits, and the long distance they have to haul the coal to the bottom of the shaft. The cost per ton is reduced to a minimum, when we compare figures as to the cost per ton for haulage in some of our mines, and the cost in Great Britain. With difference in the cost of labor taken into consideration, it is evident, to a close observer of the statistics of mining, that we are behind in that particular department of mining. The Morris Run Coal Mining Company, at Morris Run, Tioga county, this State, formerly used a locomotive in their mine; but, after repeated trials, gave it up, and it is now doing good service outside. Mr. W. S. Nearing, the superintendent and general manager, after an examination of the best English plans, came to the conclusion that an endless wire rope could be made to work successfully for mine haulage in his mine, and immediately put it into practice by having nearly a mile of wire rope put in. This rope has been in operation for over two years, and has been found to work successfully in every respect. It not only meets all the requirements for hauling coal out of the mine, but it covers that all important question, *it pays.* In conclusion, I copy an able article on underground haulage from the *Coal Trade Journal*, taken from the *London Mining Journal.* Hauling by main and tail ropes is almost the rule in the Durham and Northumberland, (England,) coal mines. The hauling engine is sometimes placed on the surface, near the top of the pit, having the boilers adjacent to it; but this plan causes additional friction on the ropes from the turns at the top and bottom of the pit, and, as will be seen from the following examples, rope friction absorbs a large proportion of the prime power. The usual method is to fix the hauling engine near the bottom of the drawing pit, so as to bring the train of wagons direct into the sidings. This, if near the upcast pit, also will be the most advantageous position for the engine in getting its supply of steam from the boilers on the surface, and also in exhausting steam into the upcast pit.

The following example of a hauling steam engine, so placed in proximity to the upcast pit, and behind the drawing pit, in a coal mine, in Durham, is a good illustration of the principle of hauling by two seperate ropes and drums. The engine has two twenty-four inch horizontal cylinders, three feet stroke, geared in the ratio of two to three. The cylinders are placed five feet apart from their centers. From the cylinders to the crank shaft, the distance is ten feet. On the middle of this shaft is fixed the fly-wheel, ten feet in diameter, weight five tons. At each end of the crank shaft a pinion is fixed four feet in diameter, working to a spur wheel six feet in diameter, at the side and on the same shaft with each a drum is placed, the drums being ten feet a part from the middle of each. The drums are five feet in diameter, three feet wide, and are put in or out of gear by sliding carriages. The engine is also constructed to pump water. A small double-acting plunger pump being placed at the back end of each cylinder. The length of steam pipe is one hundred and thirty-three yards, and of exhaust pipe one hundred yards. The engine plane is in two sections. The main way to the north is about three thousand yards in length. From a point on this plane, one thousand five hundred yards in, a branch runs off to the west, being eight hundred and fifty yards in length, or two thousand three hundred and fifty yards from the pits. While the set of wagons are at the pit, the ropes are changed so as to send the empty set of wagons into either north or west district, as required, without stopping the tram on its journey to either extremity. The length of main rope required for the north way is two thousand nine hundred and ninety yards, weight five tons six hundred weight, and of tail rope five thousand eight hundred and twenty yards, weight nine tons two hundred weight. The length of the main rope reqnired for the west way is two thousand two hundred yards, weight three tons eighteen hundred weight, and of tail rope four thousand seven hundred and ten yards, weight seven tons two hundred weight. The main rope is three inches, in circumfence. The tail rope two and three fourths inches, equal to six and three fourths pounds per f. m. The rope sheaves on the main road are five inches in diameter, placed ten yards apart. Those for the tail rope are eight and fourteen in diameter. There are other large binding sheaves at turns, and the return wheels are seven feet in diameter. The rails are being laid at twenty-eight pounds per yard, properly fished, and jointed; gauge of road twenty-two and one half inches. Weight of wagon empty five and one half hundred weight each carrying nine hundred weight of coal. The gradients in the north way vary much from the extremity. There is a rise outbye of one in seventy-four to the summit from that point to the west way end. The fall outbye averages one in one hundred and eight. From thence to the pits, the average fall is one in three hundred and seventy-six. At the extremity of the west way there is a distance on a level, then a short rise, outbye of one in twenty-two, then an average fall of one in fifty-five to the west way end. Experiments were made with the coupled engines with the object of determining the power developed in them; first, by running the engines alone; second, running them by ropes only; and thirdly, with a set of wagons laden and empty in each direction. With a set of ninety full wagons drawn outwards, the weight of the wagons and coal being sixty-five tons, and the speed at forty-eight revolutions, equal to five hundred and fifty-eight feet per minute, on a steep gradient outbye the indicated horse power was eighty-eight in one cylinder and seventy-eight in the other—equal one hundred and sixty-six horse power. Steam pressure in receiver at same time, twenty-nine pounds per square inch. Another trial with the same load on a level gradient indicated one hundred and thirty-five horse power, the average of the two trials was therefore one hundred and five and a half horse power. There is no automatic steam regulator by means of a governor with this engine. The steam is admitted or reduced as required by the attendant. The indicators were applied directly to the ends of the cylinders, not to pipes, the latter not giving correct results. With a set of ninety empty wagons drawn in on a rise of one in five hundred and forty, sixty-four revolutions per minute, and a rope speed of seven hundred and thirty-seven feet per minute, the indicated horse power was sixty-eight in one cylinder and sixty in the other, equal together one hundred and twenty-eight horse power on the level. The ropes when coupled together and run without wagons at seventy-two revolutions per minute, and a rope speed of ten hundred and fifty-four feet per minute, the indicated horse power was forty-three in one cylinder and thirty-four and a half in the other, equal seventy-seven and a half horse power. Steam pressure in the receiver twenty-six and a half pounds per square inch. With the drums disconnected from the engine, the indicated horse power of both cylinders was one hundred and three at sixty-eight revolutions per minute, and thirty-two pounds steam pressure. It thus appears that the power lost in rope friction and engine friction, inclusive, is fifty-one per cent. of the power exerted in drawing out the full wagons, and sixty per cent. loss on the power exerted in drawing the empty train inwards. Of this twelve per cent. is absorbed by friction in the engine alone.

Similar experiments were made with trains in the west way, giving in results seventy-four horse power, absorbed by the friction of ropes and engine at seventy-two revolutions per minute.

Though this way is much shorter than the north way, the number of curves in the west way caused the rope friction to be nearly equal to that of the north way, indicating the importance of having main-roads straight, and as free as possible from turnings. The average horse power required to bring the laden wagons out from the west way at sixty-four revolutions, and a rope speed of seven hundred and eighty-one feet per minute, was one hundred and twenty-three. Steam pressure twenty-seven pounds per square inch. There were eighty wagons in the train, equal to a weight of fifty-seven and three fourths tons. The gradients were a fall of one in five hundred and forty, and on another past level.

The power required to take the set of eighty empty wagons into the same way, was nearly one hundred and twenty-five horse, in a rise of one in fifty-one, and on the level, steam pressure twenty-nine pounds revolution, varying from fifty-eight to seventy per minute. It will be observed that the last power corresponds nearly with that of the empty train in the north way, though the number of wagons in the train is less, and the distance shorter. This may be accounted for by the curves in the road, by the deflection of the tail rope over a sheave to work a pump, and by the more frequent application of the brake in running in, for which it would be difficult to give the amount of power absorbed.

The total weight of a train of ninety laden wagons is sixty-five tons, to be drawn from the north way. At the starting of this load, the weight of the main rope (five tons six cwts.,) would have to be drawn, as well as half the weight of the tail rope; (four tons eleven cwts., or together, ten tons seventeen cwts., about one sixth of load,) but the rope friction being much greater than the wheel friction, the great absorption of power by running the ropes only in comparison with running with full and empty trains, is in some degree accounted for. Having at some length detailed these experiments, principally because they must be useful and interesting to practical mining men, as showing the sources from which arise loss of power in working engine planes, and how these can be, in some degree, abated by straight roads and uniform gradients, as far as practicable. Straight pull from the plane to the engine, and easy running and light sheaves for the ropes.

Whether the prime mover of the engine is steam or *compressd air*, *the result will be much the same* in useful effect performed *by the engine.*

The above article will show with what care and attention the experiments are made, with a view to reducing under-ground haulage to its maximum cost. In devoting so much of this report to under-ground haulage, it is with the hope of awakening an interest on the subject, and that our mining engineers may yet give us a *more safe and reliable* motive power than the steam locomotive that is attended with so much danger and risk to human life by its use under-ground.

Having very briefly reviewed some of the defects in our system of mining, I leave this part of my report with a hope that these few suggestions may add to the efforts now being made to give us a better system of mining than we have at present.

Very respectfully, Yours,
W. L. RICHARDS,
Inspector Third District Bituminous Coal Mines of Pennsylvania.

Condition of the Mines in the Third District.

In submitting to you this part of my report, it was with the hope that I would be able to lay before you a more satisfactory report of the condition of the mines in my district; but owing to the depressed condition of the coal market, considerable difficulty is experienced in getting the necessary improvements made that I would wish; also the bad condition in which I found some of the mines will require some time before all the improvements necessary for a thorough and complete ventilation of them can be attained.

Several of the mines visited had no system of ventilation, and will almost require to be re-opened. So far as ventilation is concerned, air-courses had to be opened, brattice and doors to be put up; in fact the entire work had to be gone over; but under the circumstances, good progress has been made. Twenty-five new ventilating furnaces have been put in, and five fans. In my correspondence with companies operating the different collieries in my district, I find a general disposition on their part to have their mines worked and ventilated as the law requires. With a few exceptions, the superintendent and inside bosses have extended to me every facility for looking over their work, and have expressed a wish to have their mine conducted in a proper manner.

Mode of Working and Ventilating of Mines.

In this district, two modes of working and ventilating a mine are adopted, and partially carried out, viz: the single and double-heading. The first system with a continuous current of air. In the second, the air current is split, so that each section of the work has a distinct and separate current of air. Either of these are good plans when strictly carried out—which is seldom the case—causing me considerable difficulty in getting the mine thoroughly ventilated.

The single-heading system is a series of parallel headings, driven at a certain distance, as the circumstances of the case will admit. Rooms or breasts are turned off these headings at right angles. The rooms or breasts are worked on what is known as the stall and pillar plan. The room or breast is generally six yards wide, the pillar four yards. No air-course is driven with these headings. The rooms or breasts are made to answer the purpose of an air-course, and here is where all the trouble of the single-heading lies. If the system was faithfully carried out, as it should be, no trouble would be experienced. In ventilating a mine on this system, one leading heading should be driven up into the body of the coal, with a back air-course. Rooms or breasts should be turned off from that heading at right angles, and driven until they come in contact with the next parallel heading, the second heading should not be driven, until the rooms or breasts are up to break into for air. Every second or third room or breast should be driven through the pillar, and used as an air course. It will be thus seen that the second heading is ventilated as it is driven on, by coming in contact with rooms or breasts of the first headings. By turning rooms or breasts off the second heading the same as the first, and have the third heading break into them for air, the series can be carried on *ab libitum.*

If in detached portions of the mine, headings are driven, they must be ventilated separately. The above is a very brief sketch of how the single-heading system should be carried out in general; but like all plans of working a coal mine, it will not be all straight work. There will be the usual troubles to encounter, such as bad dips, faults, clay-veins, and other minor difficulties to contend with, that will require sound judgment on the part of the superintendent.

I will now briefly state how I find the system carried out in too many mines in my district. A heading is driven into the solid coal, no back air-course or provision being made to break into any room or breast. The only reliable air-course they have to depend on is the rooms or breasts. They are turned off the heading, which, when driven far enough, they intend to make an air-course of. Meanwhile the men in the heading and the rooms or breasts have no air, only that forced in by the action of the wagons. If the single-heading system is properly managed it is all right; but *vice versa*, all wrong. In connection with this mode of working a mine, I have issued a circular letter to the inside bosses, calling their attention to the above facts, which will be found embodied in this report.

I will now briefly review the double-heading system: This system is preferable on account of a continuous current of air being kept up to the face of the work. No single heading is driven. Every heading on this system has a back air-course, and all breasts or rooms are turned and opened on the air-way, thus obviating, to a certain extent, the negligence of the inside boss.

The following general plan of conducting a mine on this system, (with the exception of the difficulties as stated when describing the single-heading system,) is this:

A main gangway or heading is driven, with back air-course, along a boundary line. Where there is no line to go by, it is kept at water level. Headings are driven from this at right angles, from fifty to one hundred and ten yards apart, according to the strength of the top and other circumstances. Each of these headings has an air-course running parallel with it, a pillar being between them. Rooms or breasts are turned off at right angles, and are driven up to the other parallel heading, less the gangway or heading pillar. These rooms or breasts are worked three and four together, according to the strength of the top. A good strong top will allow a range of four rooms or breasts to be worked the entire distance up to the next heading, the distance being eighty yards, thus making a square of two thousand five hundred and sixty yards worked out. Either side of this range is a pillar, fifteen yards thick, to protect the top from crushing from one range to the other. After each range of two thousand five hundred and sixty yards is worked out, it is allowed to fall in, as it relieves the superincumbent mass of top from injuring the surrounding pillars. These fifteen yard pillars that are left between the ranges are split, (*i. e.*,) a heading being driven through them. They are then drawn back. By this process, no coal is lost, no danger of the top crushing down a pillar so that it cannot be taken out. Each range of three or four rooms or breasts are taken clean out. The pillars between the ranges are then drawn, and the whole distance, eighty yards, between the headings, and of course the entire length of the heading, let that be a hundred yards or a mile, is taken all out, and not a ton of coal lost. The ventilation of the mine is effected as follows: The main current of air comes in through the main-heading; a portion of it enters the first heading of the series that is driven at right angles to the main one, goes direct to the 'top of the heading. It then enters the last cross-cut or air-way, connecting with the return air-course, and the ranges where the men are at work. Let us follow it down this air-course, as it ventilates the rooms or breasts. In its return to the ventilating furnace, it seeks to go direct down the air-course, but is checked by a brattice placed between the heading and the fifteen yard pillar that separates the ranges. It being stopped by the brattice, the air is forced up alongside the pillar to the rooms or breasts, where, after supplying the men in that particular range, it passes through air-ways made in the range pillars to the next range of rooms or breasts. After ventilating that range, it seeks to go down the air-course, as before, but is met by the brattice, as described, and forced through the air-ways to the face of the succeeding range of rooms or breasts, and so on, from range to range. After reaching the last range of rooms, it is not allowed to go to any other heading; but is conducted by an over-cast, over the top of the heading that it went up, into the return air-course of the main-heading to the furnace. By this system, each heading is ventilated separate and apart, the foul air returning from one heading not being allowed to enter another. That is the plan the double-heading should be worked on, and in some mines is pretty well adhered to; but in many cases it is much neglected. The brattice and air-ways through the range pillars are not attended to, and as a consequence, the air seeks a straight course, and passes by the rooms or breasts, (i. e.,) the main current of air.

Some times the splitting of the air is carried too far. The cur ent is weakened, and it becomes almost stagnant. Sound judgment must be used by the superintendent and inside boss, to see that the air is not split too often, as I have seen a mine that could be well ventilated, injured by so doing. With this brief statement of the different modes of working and ventilating the mines in my district, I turn to that sad part of my report, deaths and injuries in the mines. I regret that I have to report an excess of deaths and injuries by casualty in the mines over last year. Ten deaths, and forty-eight injured from various causes, the majority being by fall of coal, several by fall of roof rock and slate, others by premature explosion of powder while blasting, and one by the accidental discharge of a can of powder he was carrying in the mines. A large number of these accidents could have been avoided by taking the necessary precautions. And it is the duty of the superintendent and inside boss, to throw all the safe-guards possible around their men, and keep a careful watch over them, and see that all the necessary precautions are used in case of danger. They should also have a set of rules for their men to be governed by, of a precautionary nature. Such a set of rules, if strictly enforced, would tend to lessen the number of accidents. It is with pleasure I find that Mr. John Fulton, general mining engineer for the Cambria Iron Company, Johnstown, Cambria county, has issued such a set of rules for his men, which I have taken the liberty of copying for this report, with a hope that other managers and superintendents will take the necessary steps, and adopt such precautionary measures as they see fit for the safety of their men.

Trusting that this brief review of the mode of conducting our mines may be of some interest, I leave the subject, with the hope that the day is not far distant when all our bituminous coal mines will be found in a satisfactory condition.

Very respectfully,
WILLIAM L. RICHARDS,
Mine Inspector (Bituminous) 3d. District.

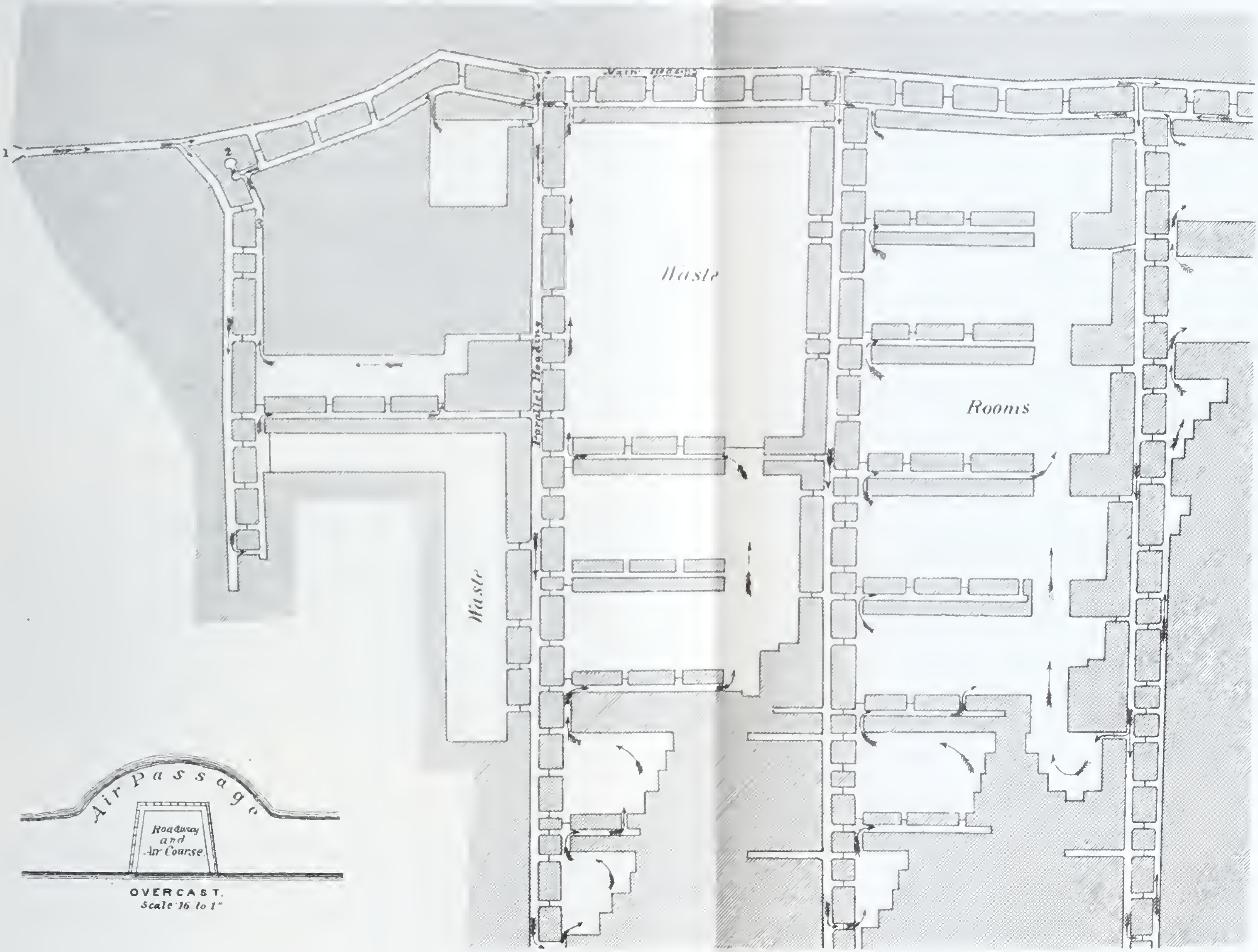
EXAMINATION OF MINES.

Morris Run Mines.

This mine is operated by the Morris Run Coal Mining Company, under the management of W. S. Nearing, general mining engineer; William R. Gilmour, mining superintendent; located at Morris Run, Tioga county, and is at present working two drifts and a slope. Mention was made of this slope in my former report, in which the coal is hauled out by an endless wire rope, four thousand four hundred feet in length. This mode of hauling coal out of a mine is found to work in every way successfully. This colliery is classed among our largest bituminous coal mines, and when running at its full capacity will ship about two thousand tons per day. The mine is ventilated by furnace, the air being split, each heading being ventilated separately. The air after leaving the heading is conducted by an *over cast* to the return air-course. The mode of working the mine is the double-heading system. An examination of the mine shows it to be well drained. The furnaces at the different drifts are large enough for the purpose for which they were intended, and by proper attendance will give a current of air sufficient to ventilate each drift and the slope. The accompanying map of a section of the work fully illustrates the mode in which the mine is worked and ventilated. This map was taken from actual workings, is no fanciful sketch prepared for this report, but an actual working plan. An examination of the section from which it was taken will show that the map corresponds with all the minute sections of the work, any explanation here would be unnecessary as just such a mine and system of working is described in the preceding pages of this report.

Fall Brook Mines.

This mine is operated by the Fall Brook Coal Company, located at Fall Brook, Tioga county. A. J. Owens, manager; James Pollock, mining supertendent. This mine was formerly among one of the largest bituminous mines of this State, but at present is very little worked. The double-heading system is adopted without an *over cast*, at the different headings. The



OVERCAST.
Scale 16' to 1"

Plan of ventilating and working Bituminous Coal on the Double Heading System, as taken from actual workings at Morris Run, Tioga County Pa.

Accompanying Report of W.m L. Richards Mine Inspector 3.d Dis.t Pa.

Scale 200 ft to 1 inch

mine is somewhat difficult to ventilate, owing to the many falls in the top reaching to the surface, but, since my last report, Mr. Polloek has made many improvements in the ventilation of his mine, and has bestowed a care and attention on the ventilation that is deserving of credit.

Arnot Mines.

Located at Arnot, Tioga county. Operated by the Bloosburg Coal Company. S. B. Elliot, general manager and mining engineer; J. J. Davis, mining superintendent.

This mine is classed among the largest (Bituminous) of the State. The mine is worked on the double-heading system, and since Mr. J. J. Davis, mining superintendent, has taken charge of it, he has introduced the *over cast* splitting the main current of air. Since my last report, Mr. Davis has improved the ventilation. A better current of air is found around the face of the work. More care is taken of the ventilation of the mine, as a whole, and Mr. Davis informs me that all the necessary steps shall be taken to have it come up to the requirements of the law; and, as they have a good ventilating apparatus, it only requires care and watchfulness on the part of the superintendent and inside bosses.

Antrim Mines.

This mine is operated by the Fall Brook Coal Company. Located at Antrim, Tioga county. Thomas Farrer, manager; Thomas Gaffney, mine superintendent. Worked on the double-heading system, and ventilated by furnace. They are at present working three drifts. Since last year, improvements have been made in the ventilation of the mines, and Thomas Gaffney, the mining superintendent, has given the subject of ventilation his attention, and is striving to improve them. Mr. Thomas Farrer has taken the interest that all managers should take, and it is evident from the care with which he measures the air current, that all the necessary improvements will be made to have the mines well ventilated.

McIntyre Mines.

Located at McIntyre, Lycoming county. G. H. Platt general manager and mining engineer. Worked partially on the double-heading system, and ventilated by furnace. As stated in my former report of this mine, it had been badly opened, and places the present manager in a bad position to get the mine in systematic order, so as to have it thoroughly ventilated. One other trouble to be met with in this mine is the extensive falls of top reaching to the surface. The company is at present working three drifts, and, since my last report, Mr. Platt, with his assistants, have been working hard at the necessary improvements to get his mine in a proper condition. A great many difficulties had to be overcome that can only be seen by going over the entire work; but the mine is gradually being put in order as fast as circumstances will admit. Mr. Platt and his assistants are in earnest in their endeavors to have their mine well drained and ventilated; but in so extensive a work it will require vigilance on the part of the inside boss to see that everything in connection with the ventilation of the mine is in perfect order, and that good fires are continually kept up in the ventilating furnaces. Doors and brattices must be strictly attended to. This will apply to all large works where the ventilation is intricate, and depends largely on good doors and brattice.

Schraeder Mines.

Operated by the Schraeder Coal Company, and located at Carbon Run, Bradford county. R. A. Abbott, general manager. This mine is worked with a mixture of the double and single-heading system, and ventilated by furnace. Three drifts are in operation, two of them being new. Most of the coal coming out of the old drift. This mine is well drained, and the ventilation of the mine has one advantage. The main current of air reaches the men direct from the outside, without having to go through much of the mine. An air-course has been driven from the opposite side of the mountain to that on which the work is located, the air having but a short distance to travel. The current of air is not large, but is compensated for by having none of the foul matter that air carries with it when traveling a long distance in a mine. Since my last report, progress has been made in the ventilation of the mine. Messrs. Williams and Jones, the two inside bosses, offered me every facility to examine their mine, and seemed to be much interested in its ventilation. Mr. R. A. Abbott, general manager, also expressed a wish to have this mine come fully up to the standard. With the facilities for ventilating this mine, it can, by proper attention and care, be brought into a good condition and, it being very well drained at the present time.

Barclay Mines.

Located at Barclay, Bradford county. Operated by the Towanda Coal Company. A. B. Chamberlin, general manager; F. F. Lyons, mining engineer. This company have four drifts, two of them being new; but most of the coal is mined in the two old drifts. The mine are worked and ventilated with a mixture of the double and single-heading system, and are well drained, as a whole. But some section of the mines will require the attention of the inside boss to keep the water off the roads. The ventilation of the mines is effected by furnace. An examination into the ventilation of the mine showed the furnaces of the drifts to be too small to give the necessary current of air. This fact was brought to the notice of Mr. F. F. Lyons, mining engineer, and he stated that the necessary alterations should be promptly made.

The arrangements for having each heading supplied with a current of air is good, and, with their furnaces enlarged, and proper attention to the doors and brattice, ventilation can be easily accomplished. I found, in drift No. 2, a portion of the work known as the south side, that had been abandoned, and latley re-opened, a very poor current of air. In company with Mr. Lyons, and the inside boss, a thorough examination of that part of the mine was made, and the discovery made of an old shaft near by that would have to be re-opened, and a furnace put in it, which Mr. Lyons ordered to be done immediately. This will ventilate that part of the mine thoroughly. The balance of the mine can be well ventilated by strict attention to the doors and brattice. Both the old drifts are in good shape for ventilation, and, with the furnaces enlarged, and strict attention on the part of the inside bosses, the mines can be kept in good order. The two new drifts are not far in, arrangements being made to have furnaces put in them, and have them properly ventilated. Messrs. Carrol and Ditchburn, the inside bosses, appear to take an interest in having their respective drifts well ventilated, and, I trust, Mr. Lyons will give them all the aid he can.

St. Mary's Mine.

Operated by the St. Mary's Coal Company. Located near St. Mary's, Elk county. Joseph Patton, general superintendent. This company have also a small mine situated about a mile east of the St. Mary's mine, called Tannerdale mine. These works are not very large, and consist of three drifts—two at St. Mary's, and one at Tannerdale. One of the drifts at St. Mary's has been driven through a small hill, and is ventilated by natural ventilation. Requested that a furnace be placed in, as it is essential to the proper ventilation of the mine. No particular plan of work seems to be adopted; part of the double and single heading system, with a little of other plans for convenience. The mine is pretty well drained, and, with a furnace, can be well ventilated. Tannerdale mine is small. Ventilated by natural ventilation. Most of the men working on the main air course. These mines being small, can, by a small furnace, be well ventilated. I found, in most of the places, a fair current of air; but in others it was stagnant, for want of some artificial force to cause the current to circulate. Called the attention of the superintendent to the fact, which he promised to rectify immediately. Mr. Patton is anxious to have his mine come up to the standard; but with the usual complaint when improvements are to be made, viz: the depressed condition of the coal market.

Cascade Mines.

Located one mile from St. Mary's, Elk county; operated by Hall & Kaul; James Black, superintendent. The mine is worked on the double-heading system. It is a new work lately opened, and is opened in good order. Mr. Black deserves credit for the way in which he has laid out his work. Arrangements were made to have a good ventilating furnace put in the mine as soon as the shaft can be put down. Hall & Kaul, having made a good start, will have no trouble in keeping their mine fully up to the requirements of the law. They have two drifts opened, and they are well drained. I trust they will continue to keep their mine in good order.

Silver Creek Mines.

Operated by D. Eldridge. Located near St. Mary's, Elk county. Worked on the single and double-heading system, natural ventilation. One drift in operation. This mine is nearly finished. The mine was troubled to some extent by local dips, causing some trouble in working the balance of the coal out. The venlilation was very good, except in one heading that was being driven to make connection with an air-course. The coming year will finish this mine.

Daguscahonda Mines.

Located at Daguscahonda, near Centreville, Elk county. Operated by the North-Western Mining and Exchange Company, Mr. David Robinson, general superintendent. Mine worked partially on the double and single-heading system. Working one drift. Ventilated by furnace. The coal from this mine is hauled up a plane nine hundred and forty-five feet long, and let down another plane four hundred and forty-five feet in length. I found this mine in very good order. Mr. John Dowie, inside boss, taking a special interest in having his mine well ventilated. The mine is very well drained, with a fair current of air in and around the face of the work. A very good and accurate map of this mine is at all times in their office, and tracings of the same has been promptly sent me from time to time as the work is progressing.

Butt's Mines.

Operated by J. E. Butts, junior. Located at Buttsville, near Alton, McKean county. J. E. Butts, superintendent. This mine is worked on the single-heading system, and working a slope and drift. At my last visit the mine was drowned out. A Cameron pump that was in use broke, flooding the mine before it could be re-placed. The mode of ventilating is by the exhaust from the steam pump. The mine is a difficult one to work and ventilate, owing to the very uneven bottom and top. Great care will be required on the part of the inside boss to see that doors and brattice are kept in good order, and air-ways driven well up to the face of the work, and other minor points that cannot be mentioned here must be attended to before the mine can be thoroughly ventilated.

Clermont Mines.

Located at Clermont, McKean county. G. Macfarlane, general manager. Operated by the Buffalo Coal Company. This mine is mostly worked on the single-heading plan; but during my last visit Mr. Macfarlane spoke of changing part of the mine to the double-heading system. The drainage in this mine is a difficult one, a large amount of water coming through the top; the vein of coal being under local swamps, and the water coming through in all headings, driven into the live coal. Ventilation is effected by furnace; and at my last examination I found a very good current of air in the headings, but for want of a proper return, it was not forced in to the rooms or breasts. This was an over sight, for to my personal knowledge the inside bosses thoroughly understand their business. Mr. Macfarlane had the mistake rectified; and I trust that Clermont mines will be found thoroughly ventilated, for all the parties having charge of the underground department are competent men and know how to ventilate a mine. With the changes now being made, and the necessary care and attention to the ventilating apparatus, Clermont mines will be fully up to the requirements of the law.

Moshannon Mines.

Located on the Moshannon creek, four miles from Osceola mills, Clearfield county. Operated by the Moshannon Coal Company, P. B. Zentmyre, superintendent. Ventilated by furnace, and worked on the single heading system. This company have two drifts in operation. The old drift is nearly worked out. Very near all their coal coming out of the new one. The coal being let down by a self-acting plane. This mine is well drained, and has a good ventilating furnace. An examination of the ventilation, showed a good current of air, with one fault, which I find to be almost universal where the single-heading system is adopted, viz: driving the headings ahead of the air-course, and not putting sufficient air-holes through the pillars. I spoke to the superintendent and inside boss about the defects in their mine, which they promised should be put right in the future. With their work put in proper shape, and the brattice and doors attended to, the mine could be thoroughly ventilated.

Beaverton Mines.

Operated by the Kittanning Coal Company. Located on the Moshannon creek, four and a half miles from Osceola mills, Clearfield county. James R. Cameron, superintendent and mining engineer. This mine is worked out, excepting a few rooms or breasts, and some pillars that are being drawn back. Ventilated by natural ventilation. The rooms or breasts are all near the air shaft, and there is no trouble in ventilating this small mine. It is all very well drained.

Old Sterling Mines.

Located at Sterling, one mile and a half from Houtzdale, Clearfield county. Operated by Robert Hare Powell. Mr. Edward McHugh, general manager. Most all of this mine is worked on the single-heading system, and ventilated by furnace. The coal is hauled out of the mine by a mine locomotive, and great care is necessary on the part of the inside boss, to see that all the ventilating apparatus is in order. The roads, on which the locomotive works, being ventilated by two furnaces for that special purpose. The company are working two drifts. The mine is among the largest in Clearfield county; but, owing to the depressed condition of the coal market, has been doing very little the past year, and for the past few months has been stopped altogether. As stated in my last report, this mine was ventilated by natural ventilation, but since then, a good ventilating furnace has been put in. The mine is very well drained, and if Mr. James Campbell will see that his headings are not driven ahead of the current of air, and air holes put through the pillars at proper distances, and attend to the doors and brattice, the mine can be well ventilated. Mr. Campbell thoroughly understands the ventilation of mines, and it only requires that he put his knowledge into practice, in order to have the mine come fully up to the requirements of the law.

Franklin Mines.

Operated by the Kittanning Coal Company. Located near Houtzdale, Clearfield county. James R. Cameron general manager and mining engineer. This mine is classed among the large works of Clearfield county. The mine is worked partially on the double-heading system, and ventilated by a good set of furnaces. The company is at present working two drifts, most of the coal coming out of No. 1 drift. The coal is hauled out of the mine by a mine locomotive. During the last two years, that part of the mine where the locomotive worked was not ventilated satisfactorily, and Mr. Cameron, after mature deliberation, determined to build an extra large furnace that should answer the purpose of thoroughly ventilating the mine, and causing a current of air sufficient to drive all the smoke and gases given off by the engine. A visit to the mine will testify that the work is well done. As this furnace is the largest in my district, I will give the dimensions and length of the shaft and stack, and the volume of air per minute passing over the fire, as carefully tested by myself. Length of fire brick arch twenty-one feet; height from grate bars to top of the arch five feet; width across grate nine feet, four inches; length of grate bars twelve feet; length of shaft and stack one hundred and twenty-seven feet; volume of air passing over the fire grate, with medium fire, as carefully taken by a Biram's six dial anemometer, fifty-four thousand three hundred and six cubic feet per minute. This furnace was built in the year 1878, and has proved in every way satisfactory. With such a furnace, this mine can be thoroughly ventilated, and only requires attention to doors, brattices, and airways to come fully up to the standard. The mine is very well drained, and, when we take into consideration the many difficulties to be overcome in this mine in the shape of clay veins, faults, and local dips, the mine is worked well, and in very good order.

Eureka Mines.

Operated by Berwind, White & Co. Located near Houtzdale, Clearfield county. Peter Cameron, superintendent. Ventilated by furnace, and worked on the single-heading system. This mine has been working steadily ever since the Moshannon branch railroad was built. It is now nearly worked out. The men are all working on the gangway pillars, and in a few months they will be finished. Mr. Peter Cameron is using all the means at his command to have this mine well ventilated, and he has a difficult task to perform, for all that are acquainted with the ventilation of mines know what a difficult matter it is to ventilate a mine where all the air-ways and pillars are being drawn back; but under the circumstances, Mr. Cameron is doing very well with the air.

Penn Mines.

Located near Houtzdale, Clearfield county. Operated by Reakirt Brothers & Co. David E. Conrad, superintendent. Ventilated by small furnace. Worked on the single heading system, and working one drift. This mine has been lately leased, and its present company have a difficult task before them. The mine is hard to work upon any plan. It is very uneaven, the vein rolling very much, causing the vein to run from thick to thin in a short distance. I examined the work thoroughly, and found that the furnace would be large enough if the air-ways were all kept tight, and doors and brattice in good order; but an examination showed a large leakage all along the main air-way. The defect was pointed out to the inside boss, who at once expressed his willingness to have the entire air-way overhauled, and leaks stopped. I also found some doors and brattice that were needed. Mr. George Gould, the inside boss is striving hard to get the mine in proper shape for working and ventilating. The drainage was very good; but it will require great care on the part of the inside boss, and good management to keep the mine thoroughly ventilated.

Beaver Run Mines.

Located on the Moshannon Branch Railroad above Houtzdale, Clearfield county. Operated by Barnhurst, Good & Co. Ventilated by furnace; but the furnace was placed in the wrong part of the mine, and very poorly built. During my examination I found this mine had been badly managed, some of the rooms or breasts running parallel with the gangway, had run into the pillar, leaving it in some places only one foot thick. I mention this fact to show that too many of our mines need more care, or the owners will find their mines ruined by having the main pillars weakened, and their mine cut up. One drift and a slope are in operation. The mine is not very extensive, but will require several alterations before it can be properly ventilated. I called the attention of Mr. Joseph Higgins to the fact that his work would have to be brought into some system before it could be horoughly ventilated. He informed me that he was aware of the fact and was striving to get the work in order.

New Sterling Mines.

Operated by Robert Hare Powell. Located on the Goss Run Branch Railroad, near Houtzdale, Clearfield county. Mine ventilated by natural ventilation, and worked on the single-heading system. This mine is the most difficult to work and ventilate in Clearfield county. The mine is well drained, and part of the mine is well ventilated, in the other part the air was not circulating to any great extent, in this part of the mine natural obstacles make it very difficult to ventilate; and Mr. James Campbell, inside boss, stated he was concentrating all his force to get it worked out as soon as possible. A heading is being driven to connect with a larger field of coal; and a good ventilating furnace is then to be put in, and, as Mr. Campbell stated, a perfect system of ventilation is to be carried out. Mr. Edward McHugh, the general manager of old and new Sterling mines, is a man that takes an interest in the working and ventilating of the mines under his charge. I found that he was fully informed on all the minutiae of the underground work, and the geological formation of the section in which his mines are located. This is as it should be. Managers should be thoroughly acquainted with all the minute details of their work if they wish to make it successful.

Goss Run Mines.

Located on the Goss Run Branch railroad, near Houtzville, Clearfield county. Operated by Berwind, White & Co. Mr. Peter Cameron, superintendent and mining engineer. This mine is ventilated by furnace, and worked strictly on the single-heading system. I found in this mine, a good ventilating furnace, built after plans of furnaces now used in Great Britian, and ordered by the British Mining Institute. It is found to work in every way satisfactory, and fully comes up to what that plan of a furnace is represented to do. The work is well laid out, and the ventilation of the mine reflects considerable credit on Mr. Peter Cameron, the superintendent, who has made mine engineering a special study. The ventilation of the mine is a specialty, and the arrangements for conducting a current of air around the face of the work are good, and only requires the superintendent to see that a proper fire is kept on the furnace, and the doors and brattice strictly attended to, when the ventilation will be found satisfactory at all times.

Ocean Mines.

Operated by John Whitehead & Co. Located on the Goss Run Branch railroad, near Houtzville, Clearfield county. John Whitehead, general manager. Worked on the single-heading plan, and ventilated by furnace. The company are, at present, working two drifts. This mine has been doing a large business during the past year, (when we take into consideration the size of the mine,) shipping over one thousand tons per day for a large part of the time. Doubts were entertained by many that it could be taken out of this mine for any length of time, and I had my fears that the mine would not be properly ventilated during the rush and excitement of filling so large an order. But Mr. Whitehead was equal to the emergency. Headings and air ways were driven night and day, and every precaution used to keep the mine well ventilated. All the dead work was properly kept up, and from present indications, his mine will be in as good condition as when he started to fill his contract. Mr. Whitehead is determined that Ocean mine shall not be behind in ventilation, and is using every means to have his work come fully up to the standard. His instructions are to the inside bosses, to have their mine well ventilated, and if the inside bosses will discharge their duty faithfully, it can be done. I would again call the attention of the inside bosses to the necessity of strictly attending to the doors and brattice, as so much depends on them in ventilating a mine with the present system of working adopted in my district

Excelsior Mines.

Located on the Goss Run branch, near Houtzville, Clearfield county. Operated by Fisher & Miller. Thomas Richards, superintendent and inside boss. Ventilated by furnace, and worked on the single and double-heading plan, part of both being adopted. This company is working one drift, and have a good ventilating furnace. I found the mine well drained, with a fair current of air through most of the work. Some of the headings were driven ahead of the current, and some doors and brattice needed. Mr. Thomas Richards, the superintendent and inside boss, stated to me that he should take care in the future that no more headings are driven in advance of the air, and the brattice and doors should be promptly attended to. Mr. Richards seemed very anxious to do what is right, and is doing all he can to get the mine in good order. The arrangements inside to circulate a current of air around the face of the work is very good. By proper attention to the brattice and doors, and by not allowing the headings to be driven in advance of the air, the mine can be well ventilated.

Webster Mines.

Operated by the Webster Coal Company, limited. Located on Goss Run branch railroad, near Houtzville, Clearfield county. Phillip Hartman, superintendent. Ventilated by furnace. Worked on the single-heading system. This company is operating two drifts, and have two very good ventilating furnaces. The mine is well drained, and well laid out. Mr. Hartman has got his mine in good shape. His rooms and headings are worked in a systematical manner. His arrangements for the ventilation of the mine are very good, and by paying strict attention to the rules for conducting a work on the single-heading system, he need have no fear that the Webster colliery will not come fully up to the requirements of the law. Let no heading be driven ahead of the air-course, and all doors be promptly put up when needed. Every back air-hole must be immediately bratticed up, so that the air can be thrown forward to the last hole made. These are a few of the details that are essential. They should be attended to in every well-conducted colliery, and they will apply to every mine in my district.

Mapleton Mines.

Located on the Laurel Run branch of the Clearfield and Tyrone railroad, two miles from Osceola mills, Clearfield county Operated by Berwind, White & Co. W. A. Crist, general manager. Ventilated by furnace, and worked on the single-heading plan, and working one drift. This mine is well drained, and a good current of air passing through the mine. The furnace is large enough to ventilate the mine thoroughly. Mr. John Allen, the inside boss, has made considerable improvement in the ventilation of his mine since last year, and is very anxious to have the mine thoroughly ventilated. The work is well laid out on the single-heading plan, and if it is carried out properly in detail, and a good fire kept in the furnace while the mine is working, the mine can be properly ventilated.

Laurel Run Mines.

Located on the Laurel Run branch railroad, Clearfield county. Operated by Nuttal & Bacon. John Nuttal, general manager. George W. McGaffey, superintendent. Worked on the single-heading system. Ventilated by furnace. Since last year, good progress has been made in this mine. A furnace has been put in ; but is not large enough to thoroughly ventilate the mine, and Mr. McGaffey, the superintendent, intends to put in a larger one, and has already commenced operations by putting down a shaft. I found the mine well drained, and I must give Mr. Thomas W. Ashcroft credit for the way he has conducted the air around the face of the work. I found a small current of air, owing to the small furnace ; but Mr. Ashcroft has kept the current intact up to the face of the work. With a larger furnace, I have no fear of Laurel Run colliery not being ventilated.

Logan Mines.

Operated by Barnhurst, Good & Co. Located on the Laurel Run branch railroad, Clearfield county. H. R. Barnhurst, general manager. William

Fitzgerald, superintendent and inside boss. Ventilated by a small furnace, and worked on the single-heading system. This mine has been the tennis ball of coal operators, having been worked by several parties, each party getting all they could out of it with the least possible expense. The result is the work has been driven in all forms. The original fault with this mine is it was opened in the wrong place, the work all going to the dip, and will be of little use to any parties operating it unless it is thoroughly drained. The present company are making efforts to get the mines in proper shape, and get a portion of it drained. Mr. Barnhurst wrote to me asking time to get their mine in order, that he wished to have his mines up to the requirement of the law. An examination of the mine showed a small current of air owing to the small furnace, in fact, it is not a true furnace but a little masonary put up for the present emergency, and not at all fitted to ventilate a mine. Arrangements are being made to have a furnace put in that will thoroughly ventilate the work as soon as the necessary heading and shaft is ready. I have not the least doubt that Barnhurst, Good & Co. are anxious to have their mine come up to what the law requires, but they were unfortunate in getting two such collieries as Beaver Run and Logan. Both will require time to get them in working order. Beaver Run is a good mine, but has been sadly abused. From the present arrangements to drain and ventilate Logan mines, it will soon be in good order.

Reading Mines.

Located on the Laurel Run branch railroad, one mile from Osceola Mills, Clearfield county. Operated by Henry Liveright & Co. Worked on the single-heading plan. Ventilated by natural ventilation. Superintendent and inside boss, Leonard Nutz. This mine has caused me considerable trouble. Last year it was operated by Richard J. Hughs. I paid a visit to the mine at that time, and found it in a very bad condition. Little or no current of air passing through the work, and poorly drained. I immediately communicated the above facts to Mr. Hughs, who promised me that steps should be immediately taken to have the mine ventilated and properly drained; but, to my surprise, at my next visit, little or nothing had been done, and, before any further arrangements could be made, the plane and drum-house caught fire, and were burnt down. The plane being the only means of taking the coal from the mine to the railroad, the mine was stopped, and remained idle for some length of time. It has now finally passed into the hands of Liveright & Co. I have made arrangements with Mr. Liveright to have a good ventilating furnace put in the mine without delay, and some other necessary alterations made to have the mine properly ventilated and drained. Since writing the above, a good ventilating furnace has been put in this mine.

Glenwood Mines.

Located on a branch road of the Tyrone and Clearfield railroad, in Clearfield county. Operated by Campbell & Brothers. Cornelius Campbell, general manager. Worked on the single-heading system, and ventilated by furnace. This company is at present working two drifts. One of the drifts is on the upper vein, the other on the regular Clearfield vein. Since my last report, this company have put in two ventilating furnaces, and got their mine in very good order. The mine is very well drained, and Mr. C. R. Colburn, inside boss, has taken quite an interest in having the mine well ventilated. With proper attention to the doors and brattice, and keeping good fires in the furnaces, a good current of air can be kept up in this mine. The arrangement for conducting it is very good.

Decatur Mines.

Operated by John Nuttal & Co. Located on the Morrisdale Branch, of the Clearfield railroad, Clearfield county. Worked on the single-heading system, except the main-gangway, which is double. Ventilated by furnace. This company is operating one drift, and, since my last report, have made a good many improvements in their mine. Mr. John Nutall, the general manager, has a difficult mine to work. Some very bad faults and local dips to contend with, that reflect considerable credit on Mr. Nuttal for the manner in which he has overcome them. Since my last report, a new ventilating furnace has been put in. This one not proving satisfactory to Mr. Nuttal, he put down a shaft at the far end of his work at considerable expense, and put in another and better furnace. Mr. Nuttal is determined that he will not be behind any other mine in Clearfield county, in the ventilation of his mine. Mr. Nuttal has risen, and overcome obstacles that would have ruined many an operator.

Morrisdale Mines.

Located at Morrisdale, Clearfield county, on the Norrisdale and Clearfield branch railroad. Operated by R. B. Wigton. Worked on the single-heading plan. The main-gangway of the new drift being double. Ventilated by furnace. W. H. Wigton, superintendent. This company is, at present, working four drifts. Three of them are nearly worked out. The new drift is well drained. Has a very good ventilating furnace lately put in. The plan of working this drift is very good, and by keeping a steady fire on the furnace, the drift can be well ventilated. The other three drifts not so well ventilated, owing to the fact that the pillars are being drawn back, and the air-ways cannot be kept in as good order as a mine that is going ahead. Mr. T. M. Lewis, inside boss, is doing the best he can under the circumstances. To ventilate a mine when closing up and drawing back the pillars, requires a good deal of attention on the part of the inside boss. The air-ways are continually being broken into, requiring a constant watch over the mine, not only for the safety of the men that are exposed to a dangerous top, (for it is always breaking when pillars are being drawn back,) but to see that the current of air is kept up to the men at their work. I would also recommend that not less than two men be allowed to work in a pillar. *Vide* order No. 2, of the Cambria Iron Company, that accompanies this report.

Sandy Lick Mines.

Operated by the Sandy Lick Coal Company. Located near DuBois, Clearfield county, on a branch road leading from the Allegheny Valley railroad. William Sharp, general manager. Worked on the single-heading system, and ventilated by steam jet. This company is working one drift. The entire work is all to the dip. The mine is drained by a steam pump. The exhaust, with a small fire at the bottom of the shaft, answers the purpose of a furnace. The mine will not be long in operation, or I should request that a ventilating furnace be put in. An examination of the mine showed a fair current of air around the face of the work, and Mr. Alexander Patterson, the superintendent and inside boss, has taken great care to have all the doors and brattice in good order, and very well kept up, thus keeping the current in circulation around the face of the work. The mine is very well drained; but, owing to many large breaks in the top, considerable difficulty is experienced after heavy rains in the spring and fall in keeping the water down, and during my last visit, arrangements were being made that would meet that difficulty in the future.

Rochester Mines.

Operated by the Rochester Coal Company. Located near DuBois, on a branch road leading from the Allegheny Valley railroad, Clearfield county. Worked on the single-heading plan. The main gangways being double. Ventilated by fire grate. F. A. Bell, general manager; Arthur McHugh, superintendent. This company has one drift in operation. The ventilation and drainage of this mine is very good upon the whole. When I visited this mine, I found it ventilated by what is known as a fire-lamp, a circular grate suspended in the up-cast shaft. This gives a very good current of air; but as the work advances, and is enlarged, it will be found to be entirely too small a fire. I laid the matter before Mr. McHugh, the superintendent, and he informed me they did not wish to do anything with the furnace until I had thoroughly examined the mine, to see if any better location could be found than the present shaft. The result was, arrangements were made, and a plan of a furnace made out to be put in as soon as possible. This work is well laid out. The headings and rooms or breasts being, with few exceptions, at right angles. The main gangway is a model heading, being driven as straight as a compass could direct it. The entire work is well laid out for ventilating, and if proper attention is paid to the doors and brattice, a good current of air can be kept up around the face of the work.

Mount Hope Mines.

Operated by Jacob Elias & Co. Located near Cameron, Cameron county, on the Philadelphia and Erie railroad. Worked partially on the single-heading system, and ventilated by a small furnace. This company is working one drift. The coal is hauled two and an half miles by a small locomotive to the head of a long plane, where it is let down to the Philadelphia and Erie railroad. The mine is very well drained, and a fair current of air going round the face of the work. The mine is not large, and Mr. John Morris, the inside boss and superintendent, has got his work in very good shape for the limited territory at his command. A little care and attention will keep this mine well drained and ventilated.

Snow Shoe Mines.

Located near Snow Shoe, Centre county, at the terminus of the Bellefonte and Snow Shoe railroad. Operated by the Bellefonte and Snow Shoe

Railroad Company. Worked and ventilated on the single-heading system. The company is working three drifts. One of the drifts having been lately put in, and is calculated to ventilate and drain the rest of the work. The mine is well drained; but the ventilation is not fully up to what it should be, for the following reason, viz: The mine is ventilated by natural ventilation, and, of course, cannot be equal to a mine ventilated by a furnace or fan. After I had examined the mine thoroughly, I found one of the drifts would be finished in a short time, and the new drift lately put in would be the one in which the bulk of the coal would be mined. In a conversation with Mr. Daniel Rhoads, the president of the company, and Mr. John S. Somerville, superintendent of the mines, I laid these facts before them. Messrs. Rhoads and Somerville expressed their desire to do all in their power to have their mine come fully up to what the law requires, and, as their old drifts were nearly finished, it was decided that a good ventilating furnace should be put in the new drift, as soon as arrangements could be made to have it put in the proper place. Mr. Somerville, the superintendent, is an old and experienced hand, and thoroughly understands his business, and has a good inside boss, Mr. Alexander Houston, who is taking quite an interest in having the mine well ventilated. With a good furnace in the new drift, and proper attention to the rest of the ventilating arrangements, Snow Shoe can be made a model mine.

Powelton Mines.

Located at Powelton, in Centre county, on the line of the Tyrone and Clearfield railroad. Operated by Robert Hare Powell. Edward McHugh, general manager and mining engineer. Worked on the single-heading plan, and ventilated by natural ventilation. Since my last report a great many improvements have been made. As stated in my last report, the mine had been doing very little, and had been getting out of repair. During the last year Mr. McHugh has been busy getting the inside part of the work in order. Roads have been drained, and headings driven to make preparation for thorough ventilation. A good ventilating furnace is to be put in as soon as the necessary arrangements are made. With the present mode of ventilating, a very fair current of air is going round the face of the mine. With a good furnace and all the other necessary arrangements completed, this mine can be thoroughly ventilated.

Robertsdale Mines.

Operated by the Rockhill Iron and Coal Company. Located at Robertsdale, Huntingdon county. At the terminus of the East Broad Top railroad. A. W. Sims, general manager; George Sleeman, superintendent and inside boss. Mine worked on the single-heading system. Ventilated by furnace. The company are operating four drifts; two being in operation most of the time, and where most of the coal is mined. This mine is the largest in Huntingdon county. A large part of their coal being used in their furnaces at Orbisonia, a few miles below Robertsdale.

When I paid my first visit to this mine, I found the work in very good order; but the ventilation was not what it should have been. Mr. George Sleeman had the work very well arranged, (except a few headings that were being driven ahead of the air.) For the ventilation of the mine, there were good doors and brattice, and very good air-courses. One thing was wanting, a furnace or fan. No means were used to create a current of air, except natural ventilation. The result was apparent, a very feeble current was found near the face of the work. I at once laid these facts before Mr. Sims, the general manager. He at once stated that it was his desire to have the mine at Robertsdale thoroughly ventilated, and in every respect be worked in accordance with the requirements of the law ; and he, without further delay, gave the order for the necessary material to build a good ventilating furnace. Orders were also given to make some other alterations that were needed. As a result of the above, the mine is now getting in proper shape to be ventilated, and as Mr. Sleeman, the superintendent and inside boss, is a man that understands his business, there is no reason why Robertsdale mine should not come fully up to all the requirements of the law.

Carbon Mines.

Located near Broad Top City, Huntingdon county, at the terminus of the Broad Top and Huntingdon railroad. Operated by Mears & Sons. J. F. Mears, superintendent and inside boss. Worked on the single-heading system. Ventilated by natural ventilation. This mine, like most of the mines in Huntingdon county, has been worked without much order or system. It is true the peculiar geological formation of this field of coal has interfered to a considerable extent with a true systematic plan of working it, but admitting this drawback, most of the mines have been sadly cut up. This mine is a fair type of the rest. The company are at present working two drifts. The mines are well drained, but ventilation in these, as in most others in Huntingdon county, is a second consideration, and will require time before the mines can be brought into some shape for a proper ventilation. After an examination of the mines, I laid the subject of a proper ventilation of them before Mr. J. F. Mears, the superintendent. Mr. Mears admitted that the necessary care and attention that should have been given to the ventilation of the mines had not been bestowed, and seemed anxious to do all in his power to have his mines properly ventilated. Arrangements were at once made to have the mines put in shape to get a good current of air around the face of the work.

Fisher Mines.

Operated by Fisher & Miller. Located near Broad Top City, on the Broad Top and Huntingdon railroad, Huntingdon county. D. R. P. Flennery, superintendent. Worked on the single-heading plan. Natural ventilation. This company is working one drift. The drainage is good, but the ventilation is not what it should be. I found the headings driven ahead of the air-course, which is the great fault of a large number who adopt the single-heading plan, and is the drawback to this system of working; if the system is properly carried out, the headings and the rooms or breasts that are turned off from them will, at all times, be well supplied with fresh air, but the mines that strictly carry out the system are very rare. Go where I will in my district, this drawback to a proper ventilation of a mine is found. When will our inside bosses be educated to know the fact that it costs no more (and in fact not so much) to work a mine properly than it does to keep their men in foul air while opening a new piece of work; no thought is taken as to where the air is to come from, the heading is started, and rooms turned off with no return air-current, and sometimes it takes months before a room or breast is driven through to the next heading. Such a system of working is a standing reproach upon the mining system of the present day. This mine is no exception to the rest, for almost every mine I enter this fault I have to contend with. Accompanying this report will be found a circular letter calling the attention of the inside bosses to the above facts. Mr. Edward Jones, the inside boss, is an old and experience miner, and a man of considerable intelligence; and if he will use the knowledge he possesses, he can properly ventilate Fisher mine. Since writing the above, the mine has been put in good order for ventilating.

Moredale Mines.

Located near Broad Top City, on the line of the Broad Top and Huntingdon railroad, Huntingdon county. Operated by Reakirk, Brother & Co. David E. Conrad, superintendent. Worked on the single-heading system. Natural ventilation. Working two drifts. One of them is nearly finished. All the coal, except one or two pillars, being worked out. The drift is in a bad condition. A heavy crush has come upon the gangway pillars. I charged the superintendent and inside boss that they must use great caution in closing this drift up. A new drift has been lately opened to work all the coal to the dip of the old drift. The ventilation of the new drift is to be effected through a shaft in the old drift, a heading being driven for that purpose. The new drift is well drained, and, as the ventilation had not been perfected, I could not properly decide what the condition of the air would be until further progress had been made. The main-gangway was getting ahead of the air, and I called the attention of Mr. James Williams, inside boss, to the fact. Mr. Williams acknowledged the fact, but stated, in excuse, he was anxious to get the gangway ahead as fast as possible. Mr. Williams thoroughly understands his calling, and knows very well that the system of driving headings in advance of the air-course is a very faulty and unscientific manner of ventilating a mine; and, I trust, Moredale will not be found among that number.

Powelton Mines.

Located near Dudley, on the line of the Huntingdon and Broad Top railroad, Huntingdon county. Jonah Reed, superintendent. Operated by Robert Hare Powell. Working one drift. Ventilated by natural ventilation. Worked on the single-heading system. This mine is one of the old works that was doing a large business when Broad Top coal was in active demand in the market, and is, at present, pretty well worked out of shape. The outer part of the mine will require to be drained. The inside, for the purpose of ventilation, will require several alterations. Two outlets for ventilation were found. One, a large part of the time, was choked up with water; the other, from a heavy crush of the top, had been almost closed in. I laid these facts before Mr. Edward McHugh, general manager, who has several colleries under his charge, and who is anxious that all the mines under him shall be properly ventilated. Mr. McHugh stated that this mine had been doing but very little for a long time. The company turning their attention to their mines in Clearfield county; and it had to a certain extent been neglected. The necessary attention it should have received had not been given; but that he would at once take the necessary steps to put the mine in order, and make the necessary arrangements to have it properly ventilated.

Lloyds' Mine.

Located at Lloydsville, Cambria county, nine miles from Bellwood, on the line of the Pennsylvania railroad. Operated by the Bell's Gap Railroad Company. Joseph Ramsey, superintendent. Worked on the single-heading system, with a few exceptions, some of the headings going double. Ventilated by a twelve foot fan. This company is working one drift. The coal being hauled to the Pennsylvania railroad on a narrow gauge railroad. A great many difficulties had to be overcome in this mine in the shape of faults. Not true faults, in the geological sense of the word; but breaks in the coal, throwing the vein up and down in a very irregular manner. The mine is very well drained, and the twelve foot fan gives over forty thousand cubic feet per minute—plenty and to spare to ventilate that mine. An examination of the work showed the air to be well kept up to the face. The only drawback being not sufficient air holes between the rooms or breasts. Mr. Thomas Dawson, inside boss, a competent and thoroughgoing man, stated that more air holes should be put through in the future. With a little attention to the brattice and doors, this mine can be well ventilated.

Horseshoe Mines.

Located three miles from the Pennsylvania railroad, at Horseshoe Bend, Blair county. Operated by S. C. Baker. Andrew Patrick, superintendent. Worked on the single-heading plan. Natural ventilation. One drift in operation. The coal from this mine is hauled three miles, by mule power, to the Pennsylvania railroad. This mine is most all to the dip, and drained by steam pump. The ventilation can be classed as average, and a proper ventilating furnace is essential to give the necessary velocity to the current of air around the face of the work, the present mode being insufficient. I laid this fact before Mr. Andrew Patrick, the superintendent, who stated that he should at once make the necessary arrangements to have a furnace put in, and make such other alterations as were necessary for the proper ventilation of the mine. Mr. Patrick has had considerable experience in mining, and, I trust, his mine will not be wanting in that most essential of all things in a mine—*fresh air.*

Porter Mines.

Operated by Denniston, Porter & Co. Located one mile from Bennington, Blair county, on the line of the Pennsylvania railroad. This company is operating a shaft. The coal being brought to the top of the shaft by the usual hoisting engine and cage. After an examination of the hoisting apparatus, I had some alteration made in the chains connecting the cage and rope. I also had horns put on the winding drum. A second opening is provided, and communication is also made with Bennington shaft, at Bennington. The mine is well drained, and worked on the single-heading system. The ventilation is effected by an old opening, one hundred and eighty feet higher than the shaft. This outlet causes a very good current of air from the shaft. Mr. Porter, the general manager, stated that he would put a furnace at the outlet, so that a steady current of air could be kept up. Stagnation of the air, during the months of September and October, was caused by the crushing in of the main airway, which runs parallel to an old abandoned work. The pillar between the old work and the airway not being of sufficient thickness, the result was, when the old workings came in, a crushing of the pillar and filling of the airway. Mr. Porter was equal to the emergency, and at once had a force of men, night and day, to drive a new airway, which he did successfully in a short time for the amount of work he had to do. He is one of those managers who attend to the inside work of their mine in person, and sees that his instructions are strictly carried out. He is very anxious to have his mine up to the requirements of the law, and his assistant and inside boss, Mr. John Leonard, has taken an interest in ventilation, and, if he will use the necessary precaution to have the doors and brattice up in time, he can soon have his mine in order.

Sonman Mines.

Operated by Dysart & Co. Located near Lilley station, Cambria county, on the Pennsylvania railroad. Daniel Laughman, general manager. John Leahey, superintendent. Worked on the single-heading system, and ventilated by a small furnace. The mine is well drained, and can be properly ventilated with the present furnace, if the air-ways are driven in the proper place, and doors and brattice attended to. During my examination of this mine, I found a very good current of air on the main gangway; but most of it was lost before it reached the face of the work, for want of proper doors and brattice. I called the attention of Mr. Leahey to this fact, and he stated that more care and attention should be given to the draining and ventilating of the mine in the future, and the present defects should be remedied at once. The reader of this report will see that I have had occasion to mention a number of times the neglect of the inside boss and superintendent to attend to the putting up of the doors and brattice. It is a common fault, and is found in almost every mine visited, and that very item alone of missmanagement has caused me a great deal of trouble. It is very strange that a boss or superintendent will allow his men to suffer for want of air, when a good current could be given them by putting up a door or brattice; but such is the fact, strange as it may seem. It is to be hoped that those having underground work under their charge will not neglect a piece of work of so much importance in the ventilation of a mine.

Benn's Creek Mines.

Located near Lilley station, Pennsylvania railroad, Cambria county. Operated by S. H. Smith & Co. S. H. Smith, general manager; John Leap, superintendent and inside boss. Worked on the single heading plan. Natural ventilation. This mine is very well drained and ventilated. The ventilation is effected by driving the headings through to daylight, and allowing a current of air to pass through. This is not very hard to do. The distance from out-crop to out-crop not being very far, and Mr. John Leap, the superintendent and inside boss, avails himself of natural advantages to ventilate his mine. An examination of the mine showed that some arrangements should be made to ventilate the headings prior to their being driven through to the out-crop, which was done, and in the future this mine can and should receive an abundant supply of fresh air.

Bennington Mines.

Located at Bennington, on the Pennsylvania railroad, Blair county. Operated by that well known company the Cambria Iron and Coal Company. Mr. John Fulton, general mining engineer, assisted by Griffith Bonner; and Martin Meagher, as superintendent and inside boss. Worked on the single-heading plan, and ventilated by two six-foot fans, known as the "Murphy champion mine ventilator." The company has one shaft and a drift in operation. Most all of the coal coming out of the shaft. The drift and the shaft communicate with each other, thus making a good second opening.

I will here take occasion to return my thanks to Mr. John Fulton for the prompt manner in which he has come to my aid in having his mines put in proper order, so that they shall come fully up to the requirements of the ventilation act. I quote an extract of a letter he sent me that speaks for itself: "The desire of the general manager of the company, Honorable D. J. Morrell, is to have the mines in good order, especially the sanitary condition of the mines. Any suggestion you may make in assisting in the good result will be appreciated, and promptly carried out." And Mr. Fulton has promptly carried out every request that has been made to improve the ventilation of the mines. An examination of this mine showed it to be well drained, and a good current of air around the face of the work. In the main air-course leading from the fan, it was impossible to keep a light. A strong and steady current of air is found at all times. With this current of air, Bennington shaft can and should be thoroughly ventilated. It only requires strict attention on the part of the inside boss to see that the doors and brattice are promptly put up, when required, and not allow headings to be driven ahead of the air-course. Let that rule be strictly adhered to, and the mine will bear an examination at any time. The hoisting engine and drum are all in good order. I examined the rope and cages, and found all satisfactory.

Johnstown Mines.

Consisting of the following, viz: Rolling Mill mine, Blast Furnace mine, Conemaugh mine, and Woodvale mine, all of them located near Johnstown, Cambria county, on the Pennsylvania railroad. Operated by the Cambria Iron Company. John Fulton, general mining engineer, assisted by Mr. John Cameron, as inside mine superintendent. These mines consist of three drifts and one slope. Are worked mostly on the single-heading system, and ventilated by fan and furnace.

Rolling Mill mine is an old mine, having been worked for a good many years. The first part of this mine, worked out several years ago, had been badly managed. It has been worked in all sorts of forms, and badly cut up. No thought had been taken as to how the balance of the coal in the field was to be worked out; no arrangement had been made to leave the necessary pillars. The result was, the present managers found some difficulty in securing and opening the present work. This drift opens up a large field of coal, and Mr. Fulton is making extensive arrangements to haul the coal out of the mine, and also to thoroughly ventilate so extensive a mine, which he has done on a liberal scale. A mine locomotive is, in the future, to haul the coal out of this drift, and for that purpose Mr. Fulton is having a proper gangway driven across the work, in a straight course into the center of the present workings. The greatest difficulty in the use of a mine locomotive is the ventilation, and as that question has already been discussed in this report, suffice it to say that Mr. Fulton has taken that question into consideration, and amply provided for that emergency, by having all his work properly arranged for that special purpose. The main air-way is large enough, leading to a circular shaft, eight feet in diameter, and having on its mouth two eight foot fans, known to operators as the Champion mine ventilator. After the introduction of the locomotive into the mine, the fan is intended to blow downward, giving one hundred thousand cubic feet of air per minute. This large current of air passes through the entire work, reaching every room and heading in the mine, and finally the entire current is forced into the gangway, where the locomotive is working, and out of the mine. With such a current of air, it is unnecessary to say that this mine could and should be thoroughly ventilated. The mine is at present well drained, and very well laid out, and only requires the current to be properly directed, and the usual means taken to keep it up to the face of the work, to have it come up to all the requirements of the law.

Blast Furnace mine. This is a slope worked like the others, partially on the single-heading system, and ventilated by a very good furnace. I found the hauling gear of this slope all in good order, and, as a precautionary measure, I requested that some extra bridle chains be put on the carriages, which was promptly done. An examination showed it to be well drained, and in very good order. The work is well laid out, and if proper care is taken not to allow the headings to be driven ahead of the air-way, and with the necessary precaution to have all the doors and brattice in good order, and the furnace properly attended to, the mine will come up to all the requirements the law calls for. Mr. John Cameron, the inside superintendent, is keeping a careful watch over all the places in the different mines under his charge; but has rather much to attend to.

Conemaugh mine is located a short distance from Johnstown. Is a small mine. The coal being reached by a drift, and worked like the rest. A small furnace is used for ventilating it. This furnace is large enough to ventilate it thoroughly, and only requires the usual attention, when the mine will be found all right.

Woodvale mine, located near Johnstown, is another small mine, employing a few men, and ventilated by a small furnace. No trouble will be found in ventilating this mine, there being but two headings in the drift working. I herewith subjoin the order of John Fulton, general mining engineer, for the purpose of showing that due care is exercised by him in protecting the miner from accidents:

General Order No. 2.

1. On and after this date, all powder used in the mines must be conveyed into the workings in sealed powder kegs, or in regular powder cans with accurate and close-fitting caps. In no case must powder be permitted to be carried into or kept in the mines in pouches, open vessels, dinner cans, or in any other than the ways described.

2. Closed kegs used in the conveyance of powder into mines can be used in the workings as magazines, keeping them at least one hundred feet from the working face, safely put away with tap always closed, except when drawing fresh supplies of powder. Powder kegs must not be used at face of workings in charging holes, or holding powder, or for any other use in this service.

3. The heads of powder kegs must not be broken so long as they contain any powder. Supplies of powder must be taken through the tap hole.

4. In all blasting operations, regular powder cans must be used, and care taken that they are placed in safe positions during the discharge of blasts, or when not in use in charging.

5. In charging bottom holes, the lamp must be removed from the miner's cap, and placed at a safe distance from the hole. In top or face holes the lamps need not always be removed, but care must be taken to guard against accidents. When a doubt exists, the safe course is to be taken, and the lamp put away from hole.

Superintendents of mines are specially directed to carry out the requirements of the above orders, and to require strict observance of them. Party or parties violating or evading this, will be immediately suspended, and the facts reported to this office for final decision.

The attention of all is called to sections six and sixteen of the ventilation act of April, 1877.

JOHN FULTON,
General Mining Engineer.

Approved:
D. J. MORRELL, *General Manager.*
Office of C. I. Co., JOHNSTOWN, PA., *May 1, 1878.*

In closing this brief review of my examination of the mines, it is with the earnest hope that both superintendent and inside boss will, in the future, attend to the details of mine ventilation. It will be seen on the preceding pages that I have frequently called the attention of the superintendent and inside boss to the fact that he had neglected some of the minor details in the ventilation of their mine, and the object they sought to attain was defeated through neglect of attending to the details. Often have I examined a mine and found a good current of air, sufficient to ventilate the mine thoroughly, and, after proceeding to the face of the work, I found little or no air, the cause being the neglect to properly attend to the brattice and doors, the air, by such neglect, is allowed to escape. A number of bosses seem to think if they have a good current of air on the gangway they are all right, the air being allowed to find its way to the face of the work the best way it can. In some of the mines I visited, nearly all the doors were in a wretched condition. Some of them would not shut at all. Others did not reach the top or bottom by eight or ten inches. A brattice was considered of very little importance, and yet the boss of such mines will talk to you about working and ventilating a mine properly.

I herewith subjoin a circular addressed by me to all the coal operators in my district during the month of June, 1878, calling their attention to the manner of ventilation, and showing them what was required:

Office of the Bituminous Mine Inspector,
Third District of Pennsylvania,
Blossburg, Tioga County, Pa., *June 3, 1878.*

To the Mining Bosses of the Third Bituminous District of Pennsylvania:

I desire to call your attention, through the medium of this circular, to the responsible position you hold under the present ventilation law of this State: "An act providing the means of securing the health and safety of persons employed in the bituminous coal mines of Pennsylvhnia." I would especially call your attention to sections four and five of said act.

Section four states "that the owner or agent of every bituminous coal mine, whether shaft, slope, or drift, shall, within six months after the passage of this act, provide, and thereafter maintain, for every such mine, ample means of ventilation, affording one hundred cubic feet per minute for each and every person employed in said mine, which shall be circulated through the main-headings and cross-headings, to an extent that will dilute, carry off, and render harmless the noxious gases generated therein, and all mines generating fire-damp shall be kept free of standing gas, and every working place shall be carefully examined, every morning, with a safety lamp, by a competent person, before any workmen are allowed to enter."

Section five provides "that in order to better secure the proper ventilation of every coal mine, and promote the health and safety of the persons employed therein, the owner or agent shall employ a competent and practical inside overseer, to be called mining boss, who shall keep a careful watch over the ventilating apparatus, the air-ways, traveling-ways, pumps, and pump timber, and drainage, and shall see that as the miners advance their excavations, all loose coal, slate, and rock overhead, are carefully secured against falling in or upon the traveling-ways, and that sufficient timber is furnished of suitable lengths and sizes for the places where they are to be used, and placed in the working places of the mines; and it shall also be the duty of the mining boss to measure the air-current at least once a week, at the inlet and outlet, and at or near the face of the headings, and keep a record of such measurements, and report the same to the inspector of his district, once in every month. The safety lamps used for examining mines, or which may be used in working therein, shall be furnished by and be the property of the owner of said mines, and shall be in charge of the agent of such mine, and in all mines generating explosive gases, the doors used in assisting or directing the ventilation of the mines shall be so hung and adjusted that they will close themselves, or be supplied with springs or pulleys so they cannot be left standing open, and bore-holes shall be kept not less than twelve feet in advance of the face of every working place, and when necessary, on the sides, if the same is driven towards and in dangerour proximity to an abandoned mine, or part of a mine, suspected of containing inflammable gases or which is inundated with water."

You will see by reading the section quoted above, that the law holds you, as mining boss, responsible for the proper ventilation and drainage of the mine under your charge, also for the safety of the men under you; requiring a constant and careful supervision of the mode in which the coal is mined and taken down; also, that the roof and traveling-ways are in a safe condition. It is now over twelve months since the passage of the present law. During that time I have visited your mines, consulted with your superintendent, and corresponded with the company that employ you, and they expressed a desire to have their mines so conducted as to carry out all the provisions of the law. To you then I shall look to have them fully carried out. The law is very explicit on this point, that each mine shall have a mining boss. The duties of the boss are clearly defined, and it is the duty of the inspector to see that you faithfully discharge them. Among the most prominent features of the bill, is that section which calls for a thorough ventilation of the mine. It requires ample means of ventilation, affording one hundred cubic feet per minute for each and every person employed in said mine. In carrying out the section above quoted, it is essential that your mine be conducted in harmony with the natural laws for the proper conducting of air-currents. In the examination of the mines in my district, I find a large number that are conducted in flagrant violation of all laws that govern air in motion, and especially air-currents in mines. One deplorable mode I will mention here—that of opening a piece of new work with a single-heading, no provision being made for a return air-current. The mining boss will tell me they make the rooms or "breasts" a return air-course, by having the men in each "breast" or room break through the pillar to his neighbor; in the meantime the men in the heading and those turning rooms or breasts, and driving them the proper distance to get room to break through the pillar, have no other air than that set in motion by the action of the cars going in and out; and I find, on examination, that the holes through the pillars, from room to room, make a poor substitute for a return air-course. With very few exceptions, those who adopt the single-heading system have no doors on the mouth of the rooms or breasts. Where then is the return air-course? I am told again that a breast or room is driven through to the other parallel heading, the distance varying from sixty to eighty or ninety yards, the air circulating from one heading to the other. Too often I find whole ranges of rooms or breasts nearly worked out before the said cross-heading or room has been driven through. The mining boss must see that such a system be abandoned, or the provisions of the ventilation law can never be carried out.

There must be a return air-course to all parts of your work, and if you wish to conduct your work on the single-heading system, reason ought to teach you, that to make a return air-course, it is essential that doors be put on the mouth of every room or breast, until a communication with the next parallel heading is made, so as to form a circuit or traveling-way for the air. If there is an inlet and outlet, there must, from the very nature of things, be an air-course; and it is the duty, as the law provides, for the mining boss to see that the air-course is made and properly kept in order, and that the air be circulated near the face of the workings. Of what use is a strong current of air in the main-headings, when very little is found in the rooms or breasts? And what there is, is heavily charged with *carbonic acid gas*, and other impure matter, thrown off from the bodies of the men while working. With a little attention to well known rules for ventilating mines, a good supply of fresh air can be taken up to the men, who expect their mining bosses to be men of intelligence. I would also call your attention to the drainage. I find several of the mines in my district very imperfectly drained. I found water on the main traveling-ways that should be removed; also, water in other sections of the works that the mining boss should not have allowed to remain.

The mining boss who thoroughly understands the nature of the duties required of him, and faithfully discharges them, will find no difficulty in carrying out the requirements of the late ventilation act. Having called your attention to some of the principal defects in the mode of ventilating many of the mines in this district, I trust that any further remarks on that subject will be unnecessary. Before closing, I wish to quote a part of section six, which says that any miners, workmen, or other persons who shall intentionally injure any shaft, lamp, instrument, air-course, or brattice, or obstruct or throw open air-ways, or carry lighted pipes or matches into places that are worked by safety lamps, or handle or disturb any part of the machinery, or open a door and not close it again, or enter any portion of the mine against caution, or disobey any order given in carrying out the provisions of this act, or do any other act whereby the lives or the health of persons, or the security of the mines, or the machinery is endangered, shall be deemed guilty of a misdemeanor, and may be punished in the manner provided in the sixteenth section of this act. In bringing the above section to your notice, it is with the hope that you will see that it is enforced, and any violation shall be punished as provided by section sixteen.

Trusting you will give this your immediate attention, I hope on my next official visit to find all the necessary means used for getting your work in a satisfactory condition to all interested parties.

I remain yours, respectfully,

WILLIAM L. RICHARDS,

Mine Inspector, Third District, Pennsylvania.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps, how many.
1	2	3	4	5	6	7	8	9	10
Barclay Mines,	Towanda Coal Company,	Semi-bitum.	. .	2	. .	. .	2	6	2
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	2	. .	5	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	2	1
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Lilly Vale Mines.	William Tiley,	Bituminous,	. .	1	. .	. .	.	2	. .
Franklin Mine,	Kittanning Coal Company,	Bituminous,	. .	2	. .	. .	2	12	1
Morrisdale Mines,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	2	. .
Morrisdale Mines,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Morrisdale Mines,	R. B. Wigton,	Bituminous,	. .	1	. .	. .		. .	. .
Ocean Colliery,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	7	. .
Mapleton Colliery,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Laurel Run Colliery,	Laurel Run Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Sterling Colliery,	R. H. Powell & Co.,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Sterling Colliery,	R. H. Powell & Co.,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Sandy Lick Mines,	John Murphy & Co.,	Bituminous,	. .	1	. .	. .	1	3	2
Eureka Colliery,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Goss Run Mines,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Excelsior Colliery,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	5	. .
Moshannon Mines,	Moshannon Coal Company,	Semi-bitum.	. .	1		. .	1	4	. .
Mount Hope Colliery,	Jacob Elias,	Bituminous,	. .	1	. .	. .	. .	2	. .
Snow Shoe Mines,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	. .	1	. .	. .	. .	. .	. .
St. Mary's Mines,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	. .	. .
McIntyre Mines,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	.	. .	10	1
McIntyre Mines,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre Mines,	McIntyre Coal Company,	Semi-bitum.	. .	1	.	. .	1	6	. .
Buttsville Mines,	J. E. Butts,	Bituminous,	. .	1	. .	. .	. .	. .	4
Morris Run Mines,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	12	. .
Morris Run Mines,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	10	. .
Fall Brook Mines,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Antrim Mines,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Blossburg Mines,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Blossburg Mines,	Blossburg Coal Company,	Semi-bitum.		1	. .	. .	1	5	. .
Blossburg Mines,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of January, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	200	56	73	332	51	11	19,940	2	67	850	29,700	730	25,506	750	26,190
3	108	7	104	20	44	168	20	.	6,250	4	140	160	24,000	162	22,680	168	23,520
. .	. .	.	162	54	47	263	27	.	11,700	2	90	90	8,100	100	9,000	95	8,550
2	50	2	66	29	30	125	17	1	5,205	2	88	114	10,032	125	11,000	125	11,000
. .	. .	. .	11	3	1	15	1	. .	. . . .	2	31	.	. . . . .	. . .	.	60	2,080
. .	. .	.	6	3	1	10	1	. .	211	2	16	160	3,000	157	2,900	156	2,800
1	15	1	130	14	18	163	17	. .	6,210	3	30	. . .	1,200	. . .	13,200	. .	12,700
. .	. .		114	28	20	160	10	5	9,200	2	36	130	4,834	127	4,699	181	4,366
. .	. .	. .	. .	. . .	. . .	. . .	.	. .	. .	2	42	137	5,784	108	4,586	137	5.784
. .	. .	. .	. .	. . .			. . .			3	48	137	5,473	127	5,461	106	4,508
. .	.	.	100	10	12	122	7	2	5,068	2	61	200	12,200	300	18,300	320	19,520
. .	. .	. .	53	17	14	84	5	1	2,952	2	42	290	12,000	330	14.538	360	15.678
. .	. .		36	8	6	50	4	2	2,900	2	30	190	6,650	110	5,4 0	150	5, 00
. .	. .	. .	113	20	9	142	9	. .	8,449	4	36	260	10,800	270	9,720	240	8,640
. .	. .		101	13	8	122	8	.	. . .	3	30	280	8,400	290	8,700	240	7,200
. .	. .	2	50	. . .	8	58	4	2	. .	2	42	250	10,500	300	12,600	250	10,500
.	. .	. .	126	24	29	179	18		9,500	2	36	. .	. . . . .	260	9,720	255	9,332
. .	. .	. .	39	4	8	51	3	. .	2,969	2	56		. . .	100	7,672	120	8,736
. .	. .	. .	85	3	9	97	3	3	3,537	2	43	200					
. .	. .	. .	40	4	8	52	5	2	5,457	2	57	. . .	30,000	. .	. . . . .	. . .	26,000
1	30	1	35	3	5	43	4	1	2,500	2	36						
.	. .		36	10	27	73	10	4	3,902	7	33	331	10,923	350	11,563	428	14,454
. .	. .	. .	80	20	10	110	3	3	5,0 0								
1	7	1	72	6	32	110	11	1	14,009	2	30	230	7,893	230	7,893	220	7,602
. .	. .	. .	80	6	40	126	13	2	. .	3	48	140	8,438	150	8,904	140	8,438
. .	. .		120	14	13	147	5	.	. . . .	4	78	170	15,982	180	16,738	160	15,225
. .	. .	3	65	13	34	112	6	4	4,200								
. .		. .	103	71	33	207	29	4	5,344	3	130	300	43,030	310	44,200	300	43,030
1	20	1	108	77	49	231	18	2	5,754	2	90	300	29,790	400	38,520	370	35,910
. .	. .	. .	31	24	15	72	8	. .	3,105	2	46	220	11,495	230	12,015	260	13,585
. .	. .	.	250	58	121	429	26	.	12,683	2	35	430	15,995	380	14,280	460	17,010
. .	. .	. .	263	121	78	462	51	1	19,069	2	68	298	20,344	280	19,093	115	9,818
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	3	40	270	10,516	280	10,904	320	12,456
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	4	65	350	22,107	290	18,324	290	18,324

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
	29	30	31	32	33	34	35	36	37	38	39
Barclay Mines, ...	700	24,670	576	103	4,944	90	4,250	90	4,520	85	4,111
Bennington Shaft, . . .	170	23,800	165	68	2,856	69	2,898	71	2,982	72	3,024
Rolling-Mill Mine, . . .	95	8,550	95	95	4,275	55	5,280	55	4,550	85	3,825
Blast Furnace Mine, . .	115	10,120	119	45	4,320	95	4,275	90	5,280	45	4,320
Conemaugh Mine, . . .	60	2,070	60	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	47	2,115
Lilly Vale Mines, . . .	157	2,900	. . .	96	1,200	90	1,000	96	1,200	96	1,200
Franklin Mine, ...	. .	12,000	500	. . .	6,200	. . . .	7,000	. . . .	6,500	. . . .	6,200
Morrisdale Mines, . . .	134	5,069	285	127	2,159	127	2,159	106	1,020	106	1,202
Morrisdale Mines, . . .	118	4,930	125	104	4,474	106	2,544	108	2,592	84	2,016
Morrisdale Mines, . . .	106	4,558	116	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Ocean Colliery, ...	320	19,520	285	180	. .	260	. . . .	280	. . . .	300	.
Mapleton Colliery, . . .	370	16,176	4,890	110	4,672	140	5,600	130	5,312	150	5,920
Laurel Run Colliery, .	170	5,780	155	110	3,160	90	3,240	90	3,240	170	4,550
Sterling Colliery, . . .	290	1,040	250	150	6,750	120	5,400	160	7,200	170	7,650
Sterling Colliery, . . .	280	8,400	260	120	6,720	150	8,400	120	6,720	130	7,280
Sandy Lick Mines, . . .	275	11,550	. .	125	5,000	150	6,000	125	5,000	138	5,520
Eureka Colliery, ...	275	11,052	295	. . . .	. . . .	300	8,937	285	8,532	310	9,180
Goss Run Mines.	130	9,296	116	. . . .	. . . .	145	6,900	157	7,296	165	7,600
Excelsior Colliery, . . .	. . .	. . . .	. . .	400	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Moshannon Mines, . . .	. . .	. . . .	. . .	. . . .	10,000	. . . .	10,000	. . . .	8,000	. . . .	8,000
Mount Hope Colliery, .	. . .	. . . .	. .	. . . .	. . . .	. . . .	. . . .	. . . .	. .	. . . .	. . .
Snow Shoe Mines, . . .	472	15,724	396	282	8,475	350	10,512	389	11,685	437	13,122
St. Mary's Mines, . . .	. .	. . . .	. . .	. . . .	. . . .	. . .	. . . .	. . . .	. . .	. . . .	. . . .
McIntyre Mines, ...	220	7,602	225	160	5,856	160	5,856	150	4,565	150	5,565
McIntyre Mines, ...	140	8,438	142	160.	5,856	170	6,147	160	5,856	160	5,856
McIntyre Mines, ...	160	15,225	167	200	7,487	200	7,488	180	6,867	180	6,867
Buttsville Mines, . . .	. . .	. . . .	. . .	. . . .	. . . .	. . . .	. . . .	. . .	. . . .	. . . .	. . . .
Morris Run Mines, . . .	325	46,010	309	90	3,600	100	4,000	105	4,200	105	4,300
Morris Run Mines, . . .	340	33,300	352	145	5,800	190	7,600	150	6,000	140	5,600
Fall Brook Mines, . . .	240	12,535	270	160	4,000	170	4,025	200	5,400	185	4,625
Antrim Mines.	450	16,660	430	150	8,800	140	8,400	150	8,880	120	7,428
Blossburg Mines, . . .	134	9,158	214	194	7,800	160	6,248	140	5,512	130	5,048
Blossburg Mines, . . .	320	12,456	297	140	3,814	170	4,987	190	5,569	160	4,696
Blossburg Mines, . . .	260	16,433	297	300	6,984	290	6,891	310	7,177	270	6,325

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
92	72	850	30,600	700	25,200	750	27,000	750	27,000	27,450	Barclay, Bradford county.
70	352	50	17,600	51	17,952	55	19,360	60	21,120	19,000	Bennington, Blair county.
91	38	300	11,400	409	15,542	300	11,400	350	13,3 0	12,9 0	Johnstown, Cambria county.
50	61	300	18,300	350	20,350	350	20,350	300	18,300	19,325	Johnstown, Cambria county.
47	30	. . .	. . . .	. . .	. .	80	2,040	89	2,670	2,535	Conemaugh, Cambria county.
. . .	. . .	157	3,300	156	2,900	158	3,100	160	3,600	. .	Lilly, Cambria county.
. . .	42	. . .	14,000	. . .	15,000	. . .	14,500	. . .	14,000	15,000	Houtzdale, Clearfield county.
116	36	117	4,680	127	5,680	128	6,580	108	4,320	4,700	Morrisdale, Clearfield county.
100	57	132	3,960	127	3,810	127	3,010	126	3,810	3,842	Morrisdale, Clearfield county.
. . .	42	115	4,846	118	5,074	125	5,461	89	3,827	4,794	Morrisdale, Clearfield county.
. . .	56	440	22,400	400	22,400	360	19,960	360	19,960	23,800	Goss Run, Clearfield county.
176	48	180	10,272	220	12,144	280	14,928	220	12,144	12,372	Mapleton, Clearfield county.
115	30	120	3,760	110	3 630	140	5,180	160	5,280	4,600	Laurel Run, Clearfield co.
130	54	240	12,960	200	10,800	200	10,8 0	310	16,740	12,825	Sterling, Clearfield county.
125	50	300	15,000	250	12,500	270	13,500	290	14,500	14,370	Sterling, Clearfield county.
. . .	42	250	10,500	300	12,600	250	10,500	275	11,550	. . .	Du Bois, Clearfield county.
208	18	.	. . . .	395	8,460	390	8,300	420	9,520	8,760	Houtzdale, Clearfield county.
155	33	. . .	. . .	230	7,971	250	10,099	255	10,260	9,443	Goss Run, Clearfield county.
. . .	33	4 0	. . . .	. . .	. . . .	. .	. .	. . .	.	. . . .	Goss Run, Clearfield county.
. . .	. . .	. .	. . . .	. . .	. . .	. . .	. .	. . .	. . . .	. . . .	Sobieski, Clearfield county.
. . .	36	.	. .	. . .	. . . .	. . .	.	. . .	. . .	. .	Mt. Hope, Cameron county.
364	40	321	12,852	360	14,404	389	15,568	457	18,284	13,890	Snow Shoe, Centre county.
. . .	. . .	. . .	. . .	. . .	. . .	. .	. .	. . .	.		St. Mary's, Elk county.
155	20	260	15,778	270	16,302	270	16,302	270	16,302	16,171	McIntyre, Lycoming county.
162	20	260	15,778	270	16,302	270	16,302	270	16,302	16,171	McIntyre, Lycoming county.
190	42	260	16,363	270	16,906	260	16,374	260	16,374	16,504	McIntyre, Lycoming county.
. . .	. . .	. . .	. . . .	. .	. . .	. . .	.	. . .	.	. . . .	Buttsville, McKean county.
100	66	800	53,856	800	53,856	800	53,856	800	53,856	. . . .	Morris Run, Tioga county.
156	52	520	29,085	630	34,177	580	31,651	520	28,560	.	Morris Run, Tioga county.
184	42	250	10,500	260	10,910	270	11,340	230	10,660	10,855	Fall Brook, Tioga county.
140	30	210	7,290	400	12,840	350	11,370	200	7,020	10,220	Antrim, Tioga county.
156	41	530	21,118	500	19,925	240	9,544	300	11,970	11,639	Arnot, Tioga county.
165	40	240	9,352	300	11,680	310	12,060	290	11,292	11,090	Arnot, Tioga county.
292	70	280	19,092	235	16,036	260	17,731	230	15,397	17,065	Arnot, Tioga county,

A **STATEMENT** *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay Mines,	Towanda Coal Company,	Semi-bitum.	. .	2	. .	. .	2	9	2
Barclay Mines,	Towanda Coal Company,	Semi-bitum.	. .	.	.	. .	. .	. .	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	2	. .	6	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.		1	. .	. .	1	2	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	2
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Bell's Gap Mine,	Bell's Gap Railroad Company,	Bituminous,	. .	1	. .	1	. .	5	.
Sonman Colliery,	Dysart & Co.,	Bituminous,	. .	1	. .	. .	1	2	. .
Eureka Colliery,	Berwind, White & Co.,	Semi-bitum.	. .	1	.	.	1	10	. .
Goss Run Colliery,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Mapleton Colliery,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Franklin Colliery,	Kittanning Coal Company,	Bituminous,	. .	2	.	. .	2	12	1
Sterling Colliery,	R. H. Powell,	Semi-bitum.	. .	1	. .	. .	1	4	.
Sterling Colliery,	R. H. Powell,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Ocean Colliery,	Whitehead & Co.,	Bituminous,	. .	2	. .	. .	1	9	. .
Morrisdale Colliery,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	.	. .
Morrisdale Colliery,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Morrisdale Colliery,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Laurel Run Colliery,	Nuttall, Bacon & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Sandy Lick Colliery,	Sandy Lick Gas Coal Company,	Bituminous,	. .	1	. .	.	1	3	2
Rochester Colliery,	Bell, Lewis & Yates,	Bituminous,	. .	1	. .	. .	1	. .	.
Excelsior Colliery,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	5	. .
Webster Colliery,	Webster Coal Co., (limited,)	Semi-bitum.	. .	1	. .	. .	. .	12	. .
Mount Hope Colliery,	Jacob Elias,	Bituminous,	. .	1	. .		. .	3	. .
Snow Shoe Mine,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	. .	1	. .	.	.	3	. .
Daguscahonda Colliery,	N. W. Mining and Ex. Company,	Bituminous,	. .	1		. .	1	5	. .
St. Mary's Colliery,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	4	. .
McIntyre Colliery,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre Colliery,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre Colliery,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Buffalo Colliery,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Antrim Colliery,	Fall Brook Coal Company,	Semi-bitum.	.	1	. .	. .	1	. .	. .
Fall Brook Colliery,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Blossburg Colliery,	Blossburg Coal Company,	Semi-bitum.	.	1	.	. .	1	. .	. .
Blossburg Colliery,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .		1	. .	. .
Blossburg Colliery,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run Colliery,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run Colliery,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run Colliery,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	10	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of February, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	208	56	73	337	59	11	17,475	4	72	650	22,860	600	21,060	670	23,500
. .		.	. . .	. .	. . .	. .	. .	. .	. .	.	50	540	12,690	480	19,200	550	21,850
3	108	7	108	22	46	176	19	. .	6,500	4	160	91	14,575	123	19,696	102	16,394
. .	.	. .	175	65	50	290	28	. .	10,456	3	90	95	8,550	96	8,610	80	7,200
2	50	2	80	31	31	145	18	1	4,876	2	88	125	11,000	126	11,888	125	11,000
. .	. .	.	13	3	1	17	1	. .	1,100	2	34	60	2,070	65	2,242	70	2,415
. .	. .	2	105	5	11	121	6	6	7,129	2	45	280	12,600	290	13,000	280	12,600
. .	. .	. .	40	8	13	61	6	1	2,907	2	51	125	8,020	.10	7,800	108	7,045
. .	. .	. .	124	23	30	177	18	. .	8,288	2	53	180	12,768	175	12,480	180	12,768
. .	. .	. .	40	5	8	53	. .	. .	2,130	2	56	150	10,388	160	10,931	150	10,388
.	. .	. .	50	17	14	81	5	1	. .	2	42	320	14,130	360	17,678	300	9,660
1	15	1	145	15	20	180	16	. .	9,712	3	30	. . .	12,000		13,530	.	10,500
1	12	1	85	11	8	104	8	.	12,000	4	36	250	9,000	240	8,640	260	9,360
. .	. .	. .	92	18	9	119	9	. .	. . . .	3	30	270	8,100	280	8,400	260	7,800
. .	. .	. .	150	10	15	175	8	4	8,112	3	61	300	18,300	220	19,520	320	19,[illegible]20
. .	. .	. .	92	37	29	158	10	6	9,500	2	37	120	5,746	90	4,673	110	5,412
. .	. .	. .	. .	. . .	. . .	. . .	. . .	. .	. .	2	42	100	6,864	140	7,540	90	5,435
. .	. .	. .	. . .	. . .		. .	. . .	. .	. .	2	40	80	5,113	90	5,493	70	5,547
. .	. .	. .	36	8	6	50	4	2	1,600	2	35	150	5,100	170	5,780	160	5,440
. .	. .	2	52	. .	8	60	4	2	3,500	2	42	200	8,100	250	10,500	250	10,500
. .	. .	. .	126	5	9	135	5	1	5,923								
.	. .	. .	102	2	3	107	3	3	5,605								
.	. .	. .	53	4	7	64	5	3									
. .	. .	. .	60	3	50	113	5	. .	2,742								
	. .	. .	36	10	27	73	10	4	3,989	7	33	331	10,923	301	9,963	379	12,523
1	30	2	70	5	15	90	6	4	5,560	2	30	234	7,020	230	6,900	236	7,080
.	. .	. .	75	20	8	103	3	3	5,000	2							
1	6	1	72	6	32	110	11	1	12,646	2	30	230	7,893	230	7,893	240	8,184
. .	.	.	80	6	40	126	13	2	. .	2	48	140	8,438	140	8,438	150	8,904
. .	. .	. .	120	14	13	147	5	. .	. .	2	78	180	16,738	180	16,738	180	16,738
. .	. .	. .	100	10	4	114	8	.	6,770	2	36						
. .	. .	. .	240	58	120	418	26	.	11,565	5	40	170	6,632	150	6,105	140	5,575
. .	. .	. .	34	24	15	73	8	. .	2,261	4	46	200	10,425	190	9,903	210	10,947
. .	. .	. .	260	122	76	458	51	1	. . . .	2	68	185	12,660	279	19,052	160	10,613
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	42	280	10,904	360	14,008	370	11,396
.	.	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	2	65	220	13,911	280	17,694	320	20,216
2	40	2	54	36	25	115	10	. .	1 068	3	90	200	21,060	210	21,960	190	20,160
.	. .	. .	51	36	26	113	17	2	2,010	2	130	250	36,790	240	35,490	220	32,890
1	20	1	106	76	30	212	20	6	4,643	2	90	200	21,060	240	24,570	250	25,470

A STATEMENT *of the Names, Power, Capacty, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current pe. minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay Mines, ...	740	25,866	665	85	4,480	85	4,080	81	3,888	93	4,466
Barclay Mines, ...	450	18,540	505	85	4,480	85	4,080	81	3,888	93	4,466
Bennington Shaft, . . .	119	19,000	199	63	2,651	89	3,700	71	3,000	83	3,500
Rolling-Mill Mine, . .	90	8, .00	90	100	4,500	100	4,500	95	4,275	98	4,410
Blast Furnace Mine, .	120	10,560	124	45	4,320	60	5,760	58	5,568	55	5.280
Conemaugh Mine, . . .	45	2,025	65	45	2,025	50	2,250	55	2,475	50	2,250
Bell's Gap Mine, ...	260	11,700	277	330	11,800	400	12,900	390	13,000	350	17,750
Sonman Colliery, . . .	125	8,060	115	. . .	. . . .	. . . .	. . .	. . . .	. . . .	.	.
Eureka Colliery, ...	180	12,768	178	200	5,616	180	5,150	210	5,848	200	5,616
Goss Run Colliery, . .	140	9,844	150	200	9,945	190	9,532	210	5,357	200	9,945
Mapleton Colliery, . .	390	16,746	360	375	12,840	390	13,176	360	12,612	410	13,780
Franklin Colliery, . . .	. . .	15,000	. . .	. . . .	7,000	. .	8,750	. .	6,000	. .	9,000
Sterling Colliery, . . .	240	8,640	210	140	6,300	150	6,750	120	5,400	120	5,400
Sterling Colliery, . . .	290	8,700	270	110	6,160	130	7,200	120	6,720	140	7,840
Ocean Colliery, . . .	340	20,700	320	280	. . . .	300	. . . .	300	. . .	310	. . .
Morrisdale Colliery, . .	110	5,415	. . .	80	2,006	60	1,666	70	2,176	50	1,513
Morrisdale Colliery, . .	90	5,435	. . .	. . . .	. . . .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .
Morrisdale Colliery, . .	70	5,547	.	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. .	. . . .
Laurel Run Colliery, .	140	4,620	155	150	3,660	150	3,660	160	4,290	150	3,660
Sandy Lick Colliery, .	. . .	. .	. . .	100	4,000	125	5,000	125	5,000	. . . .	. . . .
Rochester Colliery, . .	. . .	. . . .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Excelsior Colliery, . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	. . .	. .	. . . .	. . .
Webster Colliery, . .	. . .	. . . .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Mount Hope Colliery, .	. . .	. . . .	. . .	. . . .	. . . .	. . . .	. . .	. . .	. . . .	. . . .	. . .
Snow Shoe Mine, . . .	292	9,662	326	260	8,766	282	8,475	330	9,930	282	8,475
Daguscahonda Colliery	234	7,020	233	180	5,400	174	5,220	182	5,460	180	5,400
St. Mary's Colliery, . .	. . .	. . . .	.	. . . .	. . . .	. . .	. . . .	. . . .	. . . .	. . .	
McIntyre Colliery, . .	230	7,893	232	150	5,565	150	5,565	170	6,147	150	5,565
McIntyre Colliery, . .	150	8,904	145	160	5,856	160	5,856	180	6,438	180	6,438
McIntyre Colliery, . .	180	16,738	180	350	13,423	350	13,423	380	14,355	360	13,734
Buffalo Colliery, ...	. . .	. . . .	. .	. .	. . .	. . . .	. . . .	. . . .	. . .	. .	. . .
Antrim Colliery, . . .	150	6,105	152	80	5.616	70	5,136	65	4.944	70	5,136
Fall Brook Colliery, . .	195	10,164	199	199	3.875	150	3,750	165	4,125	155	3,875
Blossburg Colliery, . .	173	11,799	199	140	3,842	200	5,470	140	3,842	162	4,945
Blossburg Colliery, . .	340	13,232	337	150	4.405	190	5,560	210	6.151	170	4,987
Blossburg Colliery, . .	230	14,540	262	180	4,230	200	4,696	240	5,627	180	4,230
Morris Run Colliery, .	200	21,006	200	70	3,500	70	3,500	60	3,000	70	3.500
Morris Run Colliery, .	240	35,490	237	80	3,200	80	3,200	80	3,200	80	3,200
Morris Run Colliery, .	230	23,670	230	120	4,800	140	5,600	150	6,000	140	5,600

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION.
		1ST WEEK.		2D WEEK.		3D WEEK		4TH WEEK.			
Average velocity per minute for the month.	Outlet size of - sq feet	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
40	41	42	43	44	45	46	47	48	49	50	51
86	72	650	23,400	600	21,600	620	22,320	720	25,920	23,210	Barclay, Bradford county.
86	72	690	24,840	550	19,800	740	26,650	620	21,320	23,400	Barclay, Bradford county.
77	352	34	12,113	46	16,163	41	14,500	44	14,500	14,306	Bennington, Blair county.
98	38	350	13,300	350	13,300	325	12,550	350	13,300	13,1 2	Johnstown, Cambria county.
54	61	300	18,300	300	18,300	300	18,300	300	18,300	18,300	Johnstown, Cambria county.
50	30	85	2,550	90	2,700	95	2,850	90	2,700	2,700	Johnstown, Cambria county.
95	36	370	13,600	400	14,700	363	13,500	330	12,130	13,482	Lloyds, Cambria county.
. .	24	160	7,010	140	5,095	172	6,740	176	6,960	6,790	Sonman, Cambria county.
197	24	240	7,092	270	7,849	250	7,315	245	7,218	7,376	Houtzdale, Clearfield county.
200	32	320	12,614	310	12,265	320	11,943	300	11,916	12,177	Goss Run, Clearfield county.
125	48	190	10,752	220	12,141	210	11,664	260	14,061	12,144	Mapleton, Clearfield county.
. . .	42	. . .	14,700	. .	13,000	. . .	13,500	. . .	16,000	. . . .	Houtzdale, Clearfield county.
135	54	240	12,960	230	12,220	200	10,800	160	8,840	11,153	Sterling, Clearfield county.
128	50	250	12,500	250	12,500	190	9,500	170	8,500	10,750	Sterling, Clearfield county.
297	45	650	29,250	600	27,000	620	27,900	620	27,900	28,000	Goss Run, Clearfield county.
65	43	100	5,480	90	5,080	110	5,880	90	5,080	5,380	Morrisdale, Clearfield county.
. . .	56	90	3,898	110	5,508	70	3,3 3	90	3,898	4,154	Morrisdale, Clearfield county.
. . .	57	70	3,312	80	3,663	60	3,005	70	3,382	3,450	Morrisdale, Clearfield county.
152	30	95	3,125	150	5,400	140	5,400	135	4,860	4,906	Laurel Run, Clearfield county
. . .	42	200	8,400	250	10,500	250	10,500	. .	. . . .	. . . .	Sandy Lick, Clearfield county
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Dubois, Clearfield county.
. .	. . .	. . .	. . . .	. . .	. . .	. .	. . . .	. . .	. . . .	. . . .	Goss Run, Clearfield county.
. . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Goss Run, Clearfield county.
. . .	. . .	. . .	. . . .	. . .	. .	. .	. .	. . .	. . . .	. .	Cameron, Cameron county.
297	34	340	11,562	331	10,254	329	11,860	331	11,254	11,000	Snow Shoe, Centre county.
179	30	260	7,800	256	7,680	270	8,019	260	8,000	7,800	Dagnscahonda, Elk county.
. . .	. .	. . .	. .	. . .	. .	. . .	. . . .	. . .	. . .	. . . .	St. Mary's, Elk county.
155	20	270	16,302	270	16,302	280	16,826	280	16,826	16,564	McIntyre, Lycoming county.
170	20	270	16,302	270	16,402	280	16,826	280	16,826	16,564	McIntyre, Lycoming county.
360	42	270	16,906	270	16,906	270	16,906	270	16,906	16,906	McIntyre, Lycoming county.
. . .	. . .	. .	. .	. . .	. . .	. . .	. .	. . .	. .	.	Clermont, McKean county.
68	27	200	6,318	300	8,937	220	6,883	230	7,101	7,296	Antrim, Tioga county.
156	42	250	9,450	240	10,080	235	9,870	220	9,180	9,895	Fall Brook, Tioga county.
160	41	290	10,778	530	21,018	270	10,778	310	12,368	13,735	Arnot, Tioga county.
180	40	260	10,488	350	18,620	350	13,620	350	13,620	12,837	Arnot, Tioga county.
200	70	189	12,913	275	11,752	300	20,450	190	12,980	14,523	Arnot, Tioga county.
68	72	400	30,816	420	32,184	380	29,664	400	30,806	34,680	Morris Run, Tioga county.
80	66	500	34,650	480	33,4 2	440	30,822	480	33,396	33,980	Morris Run, Tioga county.
132	52	370	21,105	405	22,732	450	25,042	400	22,470	23,680	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
William Carnaigee, . .	27	Single, . .	. . . .	February 4, .	. . . .
John Murphy, ...	. . .	Single, . .	. . . .	February 4, .	. . . .
James M. Patterson, . .	23	Single, . .	. . . .	February 6, .	. . . .
Frank Kessler, ...	17	Single, . .	. . . .	February 7, .	. . . .
Michael Murphy, . . .	11	Single, .	. . . .	February 9, .	. . . .
John McCauley, ...	30	Married, . .	. . . .	February 11, .	. . . .
Charles Jones, ...	37	Single, . .	. . . .	February 14, .	. . . .
James Wilson, ...	12	Single, . .	. . . .	February 23, .	. . . .

From an investigation into the cause of the death of Frank Kessler: He was killed at the Slope mine, Johnstown, Cambria county, by a fall of slate. He was driving a mule in a cross heading, where the men are taking out pillars, and consequently there was a very large opening, which caused a surge to be thrown back on the pillars. Kessler was waiting for one of the men to finish loading his car, and was sitting under a piece of slate that projected from the side. The roof had been blasted, and two

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of February, 1878.

NATURE OF ACCIDENT.	REMARKS.
Right foot crushed, ...	While working at inside pump, McIntyre Coal Company, McIntyre colliery, McIntyre, Lycoming county, Pa.
Collar bone broken, . . .	By a fall of coal, Cambria Iron Company, Conemaugh mine, Conemaugh, Cambria county, Pa.
Foot crushed, ...	By a fall of roof stone, Blossburg Coal Company, Arnot mines, Arnot, Tioga county, Pa.
Killed, ...	By a fall of roof stone, Cambria Iron Company, Blast Furnace mine, Johnstown, Cambria county, Pa.
Leg broken, ...	Caught between two mine cars, Cambria Iron Company, Rolling-Mill mine, Johnstown, Cambria county, Pa.
Foot bruised, ...	By fall of roof rock, Berwind, White & Co., Eureka colliery, Houtzdale, Clearfield county, Pa.
Bruised, ...	By falling into chutes, Blossburg Coal Company, Arnot mines, Arnot, Tioga county, Pa.
Bruised; not serious, . . .	Caught between mine cars, Kittanning Coal Company, Franklin mines, Houtzdale, Clearfield county, Pa.

slips were found crossing each other at right angles. This piece of slate had been left, and a sudden settling of the roof caused it to become detached and fall, without giving any warning. The man who works in the place had examined the piece of slate but a short time before, and found it to be solid to all appearance. After an investigation, it was found to be an unavoidable accident—no blame being attached to any of the parties concerned.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	2	. .	. .	2	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Porter,	Deniston, Porter & Co.,	Semi-bitum.	. .	. .	1	. .		3	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	7	3
Rolling Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	Campria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	.
Lloyd,	Bell's Gap Railroad Company,	Bituminous,	. .	1	. .	1	. .	5	. .
Sonman,	Dysart & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Snow Shoe,	Bellefont and Snow Shoe R. R. Co.	Bituminous,	. .	. .	. .	. .	. .	3	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	7	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Sterling,	Robert Hare, Powell & Co.,	Semi-bitum.	. .	1	. .	. .	2	7	. .
Sterling,	Robert Hare, Powell & Co.,	Semi-bitum.	. .	1	. .	. .	2	7	. .
Laurel Run,	John Nuttall & Co.,	Bituminous,	. .	1	. .	. .	1	3	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	2	. .	. .	1	3	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	3	. .
Webster,	Webster Coal Company, Limited,	Semi-bitum.	. .	1	. .	. .	1	12	. .
Rochester,	Bell, Lewis & Yates,	Bituminous,	. .	1	. .	. .	1	8	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	6	1
Excelsior,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	5	. .
Daguscahonda,	North-Western M. and Ex. Co.,	Bituminous,	. .	2	. .	. .	1	6	. .
Mooredale,	Reakirt Bros. & Co.,	Semi-bitum.	. .	1	. .	. .	. .	. .	. .
Fisher,	Fishers & Miller,	Semi-bitum.	. .	1	. .	. .	. .	5	. .
Carbon,	J. F. Mears,	Semi-bitum.	. .	1	. .	. .	. .	5	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre.	McIntyre Coal Company,	Semi-bitum.		1	. .	. .	1	6	. .
Buffalo,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	2	. .	. .	. .	2	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	. .	. .	. .	. .	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Blossburg,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Blossburg,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Blossburg,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run.	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	10	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of March, 1878.

Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
										Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	208	56	73	337	59	11	18,008	2	66	780	23,886	560	19,820	930	31,806
. .	. .	. .	. . .	. . .	. .	. . .	. . .	. .	. . . .	. . .	50	485	18,307	410	16,430	410	15,920
1	20	2	35	9	21	65	9	1	2,110	2	20						
3	108	7	108	22	48	176	19	. .	7,000	4	140	143	20,000	168	23,500	168	23,500
. .		. .	178	73	51	303	28	.	11,150	3	90	80	7,200	95	8,550	95	8,550
2	50	2	82	40	31	153	18	1	5,115	2	88	125	11,000	128	11,261	130	11,440
. .	.	.	13	3	1	17	1	. .	1,000	2	35	61	2,140	71	2,419	65	2,242
. .	. .	2	93	5	14	112	7	6	6,981	2	35	360	13,500	375	14,000	330	12,700
. .	.	. .	60	8	15	83	8	1	3,998	2	54	1,550	8,090	1,495	7,085	1,565	7,835
. .	. .	. .	34	10	13	57	10	4	2,239	7	33	282	9,322	292	9,642	253	8,362
. .	. .	. .	38	5	6	49	3	. .	2,222	2	56	140	7,604	145	7,876	160	8,691
. .	.	. .	118	21	7	180	19	. .	9,564	2	56	175	10,100	170	9,811	180	10,388
. .	. .	. .	50	17	14	81	5	1	2,772	2	70	370	17,056	340	14,958	330	14,658
.		. .	27	8	2	37	3	. .	2,975	2	56	. . .	. . . . .	100	4,821	90	4,461
1	12	1	100	11	12	123	8	. .	12,733	5	36	200	7,200	190	6,810	220	7,920
.	.	. .	97	18	16	131	8	. .	. . .	3	36	200	7,200	200	7,200	230	8,280
. .	. .	. .	35	8	6	49	4	2	3,333	2	30	160	6,456	170	6,800	150	6,133
. .	. .	. .	120	10	15	145	9	4	11,550	2	72	250	15,250	250	15,250	260	15,860
.	. .	. .	52	6	10	68	5	1	3,276	2	57	223	31,000	220	30,000	210	32,000
. .	. .	. .	100	14	24	138	9	2	5,297	2	48	200	10,000	210	10,500	205	10,250
. .	. .	. .	80	5	7	92	4	1	6,109	2	56	300	15,000	320	16,000	300	15,000
. .	. .	. .	125	26	24	175	10	6	10,000	2	60	70	3,928	90	4,672	70	5,746
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	70	80	5,021	60	4,196	80	5,055
. .	. .	. .	. . .	. .	. . .		. . .	. .	. . . .	2	24	60	4,216	70	4,680	60	4,216
. .	. .	. .	175	37	13	225	21	. .	10,199	3	30	250	8,450	200	5,940	250	8,460
. .	. .	. .	110	1	10	121	4	4	6,000	. . .	51						
1	30	2	115	10	8	143	3	. .	2,238	2	30	236	7,080				
. .	. .	. .	27	4	2	33	5	. .	1,228	2	42						
. .	. .	. .	14	2	. . .	16	1	.	747	2	42	160	. . . .	160	. . . .	160	
. .	. .	. .	30	10	7	47	4	1	199	2	40						
2	6	2	62	6	32	100	10	1	8,241	2	30	230	7,893	220	7,602	230	7,893
. .	. .	. .	75	4	40	119	13	2	. . . .	2	48	140	8,438	150	8,904	150	8,904
. .	. .	. .	115	13	13	141	5	. .	. . .	2	78	160	16,363	170	15,982	180	16,738
. .	. .	. .	140	. . .		. . .	8	. .	7,193								
. .	. .	. .	220	50	110	380	25	. .	6,625	5	33						
. .	. .	. .	. . .	. . .	. .	. . .	. . .	. .	. . . .	. . .	33	150	6,105	160	6,435	200	7,722
. .	. .	. .	34	21	16	74	9	. .	2,676	4	46	220	11,190	125	11,121	215	11,756
. .	. .	. .	262	121	70	454	51	1	. . . .	2	68	184	12,241	212	14,163	308	20,431
. .	. .	. .	. . .	. . .	. .	. . .	. . .	. .	. . . .	2	40	330	12,811	230	8,961	307	14,396
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	65	310	19,588	290	18,321	280	17.694
2	40	2	54	36	25	115	10	. .	1,357	3	90	150	16,740	170	18,360	200	21,060
. .	. .	. .	51	36	26	113	17	2	3,507	3	130	210	35,490	250	36,790	240	35,490
1	20	1	106	76	30	212	20	6	4,322	2	90	200	21,060	240	21,570	230	23,670

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	580	19,836	687	83	4,004	68	3,266	103	4,490	68	3,226
Barclay,	430	18,400	428	83	4,004	68	3,266	103	4,490	68	3,226
Porter,	...	...	...	...	...	...	...	...	...	...	...
Bennington Shaft,	167	2,320	161	124	5,200	136	5,700	136	5,700	130	5,400
Rolling Mine,	95	8,550	91	75	3,375	95	4,275	100	4,500	100	4,500
Blast Furnace Mine,	130	11,440	128	45	4,320	57	5,472	60	5,760	60	5,760
Couemaugh Mine,	67	2,312	66	45	2,025	55	2,475	50	2,250	50	2,250
Lloyd,	330	12,700	350	581	12,450	454	14,113	390	12,120	385	11,995
Sonman,	1,610	7,940	555	...	...	...	...	...	...	...	...
Show Shoe,	243	8,042	267	243	7,710	253	7,602	204	6,147	254	7,020
Goss Run,	150	8,148	148	190	7,832	175	7,150	150	7,626	190	7,832
Eureka,	165	9,522	172	210	4,888	190	4,423	190	4,423	180	4,190
Mapleton,	360	16,670	...	130	3,984	120	3,744	120	3,744	140	4,200
Decatur,	120	5,544	103	...	...	50	2,646	40	2,330	100	4,221
Sterling,	210	7,560	380	130	5,330	120	4,920	140	5,740	130	5,330
Sterling,	200	7,200	470	130	7,020	100	5,400	110	5,940	120	6,480
Laurel Run,	130	5,467	152	120	3,696	150	4,416	135	4,056	95	3,096
Ocean,	260	15,860	255	240	...	240	..	250	...	260	...
Moshannon,	250	35,000	233	80	4,000	80	4,200	60	3,000	50	2,500
Webster,	200	10,000	208	210	8,820	200	9,660	215	9,030	219	9,198
Rochester,	290	14,500	210	130	6,500	140	7,000	157	7,850	127	6,350
Morrisdale,	160	7,480	...	...	...	...	...	...	...	...	...
Morrisdale,	140	7,639	...	...	...	...	...	...	...	...	...
Morrisdale,	100	5,936	...	...	...	...	...	...	...	...	...
Franklin,	225	6,540	231	200	7,920	225	8,720	175	6,720	200	4,920
Excelsior,	...	...	...	...	...	...	...	...	...	...	...
Daguscahonda,	...	...	...	182	5,460	...	...	...	...	...	...
Mooredale,	...	...	...	...	...	...	...	...	...	...	...
Fisher,	160	...	...	90	...	90	...	90	...	90	...
Carbon,	...	...	...	...	...	...	...	...	...	...	...
McIntyre,	240	8,184	230	150	5,565	150	5,565	160	5,856	170	6,147
McIntyre,	190	10,766	157	160	5,856	170	6,147	180	6,488	180	7,438
McIntyre,	190	17,695	175	180	6,867	200	7,488	180	6,867	200	7,488
Buffalo,	...	...	...	...	...	...	...	...	...	...	...
Antrim,	...	...	...	65	4,944	70	5,136	70	5,136	60	4,704
Antrim,	170	6,732	225	65	4,944	70	5,136	70	5,136	60	4,704
Fall Brook,	190	9,903	212	170	4,250	160	4,000	170	4,250	155	3,850
Blossburg,	179	11,899	221	140	3,299	150	3,532	200	4,696	160	3,765
Blossburg,	230	8,964	290	190	5,567	150	4,405	180	5,278	130	3,823
Blossburg,	230	14,541	277	180	4,230	210	4,928	210	4,928	180	4,230
Morris Run,	210	21,960	182	60	3,000	70	3,500	80	4,000	85	4,250
Morris Run,	270	39,260	250	80	3,200	80	3,200	80	3,200	90	3,600
Morris Run,	260	26,370	232	110	4,440	140	5,600	130	5,200	150	6,000

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
80	72	760	27,360	535	19,460	900	31,500	600	24,736	21,761	Barclay, Bradford county.
80	72	610	21,960	760	27,360	500	17,800	690	24,840	21,900	Barclay, Bradford county.
. . .	40	300	13,200	315	14,800	260	11,680	290	12,810	13,460	Bennington, Blair county.
134	352	48	17,000	53	18,800	53	18,800	53	18,500	18,128	Bennington, Blair county.
92	38	300	11,400	325	12,350	350	13,300	350	13,300	12,587	Johnstown, Cambria county.
55	61	300	18,300	300	18,300	350	21,350	350	21,350	19,825	Johnstown, Cambria county.
50	30	90	2,700	100	3,000	95	2,850	95	2,850	2,850	Johnstown, Cambria county.
415	33	470	. . . .	475	15,000	. . .	. . . .	440	14,500	. . . .	Lloys, Cambria county.
. . .	28	1,510	7,930	1,438	7,145	1,495	7,685	1,595	7,480	7,553	Sonman, Cambria county.
244	34	310	10,214	331	11,254	340	11,583	300	11,913	11,224	Snow Shoe, Centre county.
185	32	300	10,476	290	10,126	300	10,476	290	10,126	10,301	Goss Run, Clearfield county.
192	24	270	6,809	250	6,305	260	6,557	240	6,052	6,431	Houtzdale, Clearfield county.
127	48	240	13,056	230	12,624	230	12,624	250	13,536	12,960	Mapleton, Clearfield county.
63	32	. . .	. . . .	75	3,924	75	3,924	105	5,004	4,217	Decatur, Clearfield county.
5,340	54	130	7,200	140	7,560	120	6,480	160	8,610	7,575	Sterling, Clearfield county.
6,210	50	200	10,000	200	10,000	210	10,500	230	11,500	10,500	Sterling, Clearfield county.
125	30	140	6,264	150	6,624	130	5,904	130	5,904	6,174	Laurel Run, Clearfield co.
272	45	480	21,600	500	22,500	500	22,500	510	22,950	22,387	Goss Run, Clearfield county.
67	. . .	450	40,000	300	30,000	350	35,000	450	45,000	. . . .	Sobieski, Clearfield county.
221	25	630	15,725	600	15,000	638	15,950	593	11,825	15,375	Goss Run, Clearfield county.
148	56	300	15,000	298	14,900	320	16,000	290	14,900	. . . .	Du Bois, Clearfield county.
. . .	50	60	3,560	90	4,600	70	4,921	150	6,738	45,959	Morrisdale, Clearfield county.
. .	56	70	3,186	50	2,625	70	3,184	120	4,602	3,399	Morrisdale, Clearfield county.
. . .	16	50	3,566	60	2,821	70	3,114	110	4,522	3,258	Morrisdale, Clearfield county.
200	. . .	400	13,000	300	10,000	400	13,000	400	13,000	13,400	Franklin, Clearfield county.
. . .	36	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Goss Run, Clearfield county.
. . .	. . .	270	8,100	. . .	. . . .	. .	. . . .	. . .	. . . .	. . . .	Daguscahonda, Elk county.
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. .	. . . .	. . .	Dudley, Huntingdon county.
. . .	. .	160	. . . .	160	. . . .	160	. . . .	160	. . . .	. . . .	Dudley, Huntingdon county.
. . .	. . .	. . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Broad Top City, Hunt'don co.
157	20	270	16,302	270	16,302	270	16,302	300	17,874	16,695	McIntyre, Lycoming county.
175	20	270	16,302	270	16,302	270	16,302	300	17,874	16,695	McIntyre, Lycoming county.
190	42	260	16,363	260	16,363	270	16,906	280	17,419	16,770	McIntyre, Lycoming county.
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Clermont, McKean county.
66	35	390	14,630	400	14,980	400	15,295	400	14,980	400	Antrim, Tioga county.
66	27	250	6,530	260	7,614	270	8,127	240	7,341	225	Antrim, Tioga county.
164	42	300	12,600	325	13,650	320	13,440	310	13,020	13,177	Fall Brook, Tioga county.
163	41	330	13,164	350	14,959	630	25,095	400	15,948	17,292	Arnot, Tioga county.
160	40	310	12,068	260	10,028	300	11,680	290	11,292	11,267	Arnot, Tioga county.
195	70	270	18,413	260	17,734	260	17,734	210	14,319	17,055	Arnot, Tioga county.
74	72	225	18,576	250	20,376	500	31,536	420	32,184	. . . .	Morris Run, Tioga county.
83	66	500	34,650	520	35,904	410	34,660	540	37,221	. . . .	Morris Run, Tioga county.
132	53	430	23,992	495	27,300	470	26,040	530	29,085	. . . .	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Lewis Cevalley, ...	30	Single, . . .	. . . .	March 12, . .	. . . .
Siprien Villencoe, . . .	. . .	Single, . . .	. . . .	March 15, . .	. . . .
John McDooald, ...	. . .	Married, . .	. . . .	March 15, . .	. . . .
James Peters, ...	40	Married, . .	. . . .	March —, . .	. . . .
Andrew Ruddock, . .	36	Married, . .	. . . .	March 15, . .	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of March, 1878:

NATURE OF ACCIDENT.	REMARKS.
Side bruised, ...	At Eureka mines, Clearfield county; by fall of slate from the roof; recovering.
Arm broken, ...	At Eureka mines, Clearfield county; by fall of stone from roof; doing well.
Body badly bruised, ...	At Lloyd's mines, Cambria county; while underminining, from a fall of slate; out of danger.
Burnt by powder, ...	At Fall Brook mines, Tioga county; by a can of powder igniting; eyes and face badly burned.
Left side bruised, ...	At McIntyre mines, Lycoming county; by being caught between the timbers and the wagon; recovering.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.		1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Porter,	Deniston, Porter & Co.,	Semi-bitum.	. .	. .	1	. .	. .	4	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	6	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Blast Furnace Mine,	Cambria Iron Company,	. . . .	1	. .	. .	. .	1	3	2
Mount Hope,	Jacob Elias,	Bituminous,	. .	1	. .	. .	1	3	.
Powelton,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	.	3	. .
Snow Shoe Mine,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	. .	1	. .	. .	.	3	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.		1	. .	.	1	8	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Laurel Run,	John Nuttall & Co.,	Bituminous,	. .	1	. .	. .	1	6	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Sonmon,	Dysart & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	10	. .
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	. .	1	12	. .
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	.	1	. .	. .
Rochester,	Bell, Lewis & Yates,	Bituminous,	. .	1	. .	. .	1	8	. .
Sterling,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	2	6	. .
Sterling,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	2	5	. .
Penn,	Reakirt Brothers & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Excelsior,	Fisher Brothers & Miller,	Bituminous,	. .	1	. .	. .	1	5	. .
Reading,	Richard J. Hughs,	Bituminous,	. .	1	. .	.	1	2	. .
St. Mary's,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	. .	. .
St. Mary's,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Tanerdale,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	. .	. .
Daguscahonda,	N. W. Mining and Ex. Company,	Bituminous,	. .	2	. .	. .	1	5	. .
Moredale,	Reakirt Brothers & Co.,	Semi-bitum.	. .	1	. .	. .	. .	2	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Blossburg,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Blossburg,	Blossburg Coal Company,	Semi-bitum,	. .	1	. .	. .	1	3	. .
Blossburg.	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of April, 1878.

Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.							
												1ST WEEK.		2D WEEK		3D WEEK.	
										Number of openings.	Inlet—size of—feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	. . .	. .	. . .		. . .	. .	. . . . .	. . .	68	540	18,080	455	16,058	540	19,136
. .	. .	. .	206	56	74	336	59	11	15,384	2	80	325	12,175	375	14,945	310	12,205
1	25	2	30	11	23	64	9	2	2,417	2	60	275	. .	315	. .	250	
3	. .	7	112	23	42	177	20	. .	8,000	4	140	. .	21,857	. . .	23,538	. . .	19,300
. .	. .	. .	173	73	52	303	27	. .	10,739	3	90	95	8,550	98	8,882	95	8,550
2	50	2	82	40	31	153	18	1	4,982	2	88	150	13,200	150	13,200	150	13,200
. .	. .	. .	40	31	1	41	4	1	3,000	2	36	234	9,594	200	8,200	233	9,200
. .	. .	. .	25	5	1	31	1	1	1,000	2	33	100	3,300	100	3,300	90	970
. .	. .	. .	34	10	13	57	10	4	2,428	7	33	282	9,322	272	9,002	263	8,682
. .	. .	. .	116	33	30	179	19	. .	11,350	2	56	175	12,480	160	11,614	155	11,325
. .	. .	. .	24	4	7	35	3	. .	2,100	2	56	145	10,116	140	9,844	150	10,338
. .	. .	. .	44	17	16	75	5	1	3,037	2	72	330	14,658	360	15,678	370	16,056
. .	. .	. .	35	8	6	49	4	2	3,100	2	34	130	5,576	120	5,236	120	5,576
. .		.	28	8	2	38	3	. .	2,850	2	36	80	4,104	70	3,744	60	3,354
. .	. .	. .	80	12	18	40	8	1	4,743	3	54	150	9,190	95	8,065	100	8,950
. .	. .	.	110	30	20	160	10	6	7,000	3	36	70	4,428	70	4,428	50	3,404
. .	. .	. .	. .	. . .	. . .	. . .	. . .	. .	. . . .	. .	42	60	4,606	70	4,644	50	3,827
. .	. .	. .	. . .	. .	. . .	. . .	. . .	. .	. . . .	. . .	42	50	3,827	70	4,644	60	4,214
. .	. .	. .	186	28	. .	214		.	9,084	4	30	200	6,000	250	7,500	225	6,750
. .	. .	. .	123	37	27	157	10	10	6,625	4	42	233	10,485	230	10,350	240	10,800
. .	.	.	. . .	. .	. . .	. . .	. . .	. .	. . . .	. . .	43	260	11,960	250	11,500	270	12,420
. .	. .	. .	76	4	9	85	5	1	5,238	2	48	300	14,400	300	14,400	300	14,400
1	12	1	100	11	18	129	8	. .	13,469	4	36	300	10,800	320	11,520	350	12,600
. .	. .	. .	93	17	13	123	8	. .	. .	3	36	310	11,160	340	11,160	360	12,960
. .	. .	. .	39	10	5	34	3	2	1,937	2	40	95	5,280	90	5,080	90	5,080
. .	. .	. .	120	3	11	134	5	4	9,252	2	64	258	16,512				
. .	. .	. .	25	1	4	30	1	1	1,600								
. .	. .	. .	65	29	7	104	2	4	4,900	4	42	230	11,046	240	11,424	210	11,424
.	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	2	42	250	11,841	250	11,844	260	12,264
. .	. .	. .	16	4	4	24	1	1	1,500	2	42	220	10,626	320	10,626	230	11,046
1	30	2	75	10	2	87	4	. .	3,628	4	30	185	3,700	190	3,800	183	3,660
. .	. .	. .	8	1	1	10	1	.	465	2	42	150					
1	6	1	59	7	30	96	9	1	9,387	3	30	220	7,602	230	7,893	220	7,602
.	. .	. .	75	4	42	161	14	2	. . . .	2	48	140	8,438	140	8,438	150	8,904
. .	. .	. .	119	16	15	150	6	. .	. .	3	78	170	15,982	160	15,525	180	16,738
. .	. .	. .	54	30	18	92	10	. .	5,325	4	27	210	10,970	200	10,448	195	10,187
. .	. .	. .	215	45	105	365	24	. .	9,488	5	33	156	6,105	160	6,435	160	6,435
. .	. .	. .	253	117	67	437	51	1	. . . .	4	42	250	10,225	260	10,632	280	14,447
. .	. .	. .	. . .	. . .	. .	. . .	. .	. .	. . . .	. . .	40	370	14,396	260	10,128	280	10,904
. .	. .	.	. . .	. .	. . .	. . .	. . .	. .	. . . .	. . .	65	550	22,107	200	12,650	230	14,541
2	40	2	54	36	25	115	10	. .	1,314	3	90	215	22,410	210	21,960	200	21,060
. .	. .	. .	51	36	26	113	17	2	3,446	3	130	215	32,370	210	31,720	220	32,890
1	20	1	106	76	30	212	20	6	3,746	2	90	215	22,410	230	23,670	210	21,960

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	520	18,720	513	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Barclay,	330	13,110	334	66	3,168	56	2,088	66	3,168	65	3,120
Porter,	275	. . . .	. . .	. .	400	. . . .	460	. . . .	480	. . . .	494
Bennington Shaft,	. . .	18,300		. . . .	6.150	. . . .	4,900	. . . .	4,300	. . . .	6.000
Rolling-Mill Mine,	98	8,820	96	78	3,510	80	3,600	100	4,500	100	4,500
Blast Furnace Mine,	150	13,200	150	60	5,760	62	5,952	48	4,680	45	4,320
Mount Hope,	188	7,640	239	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Powelton,	80	2,640	352	75	2,625	80	2,800	70	2,450	50	1,750
Snow Shoe Mine,	282	9,322	9,082	263	7,893	253	7,602	243	7,311	263	7,893
Eureka,	170	12,191	165	200	5,516	190	5,499	190	5,383	200	5,616
Goss Run,	145	10,116	145	195	9,738	170	8,708	180	9,120	190	9,532
Mapleton,	350	15,378	340	140	5,600	150	5,920	140	5,560	120	4,992
Laurel Run,	150	6,256	132	110	5,184	100	3,824	100	3,824	110	5,184
Decatur,	70	3,744	70	45	2,528	40	2,368	35	2,208	40	2,368
Sonmon,	130	9,010	100	. . . .	. . . .	. . . .	. . . .	. . . .	. .	. . . .	. . . .
Morrisdale,	60	4,626	65	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Morrisdale,	60	4,214	68	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Morrisdale,	51	3,822	70	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Franklin,	200	6,000	125	123	5,000	175	7,000	150	6,000	100	4,660
Webster,	235	10,575	234	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Webster,	265	12,190	261	. . . .	. .	. .	. . . .	. . .	. . . .	. . . .	. . . .
Rochester,	300	14,400	300	290	13,920	300	14,000	270	12,960	280	13,440
Sterling,	290	10,440	298	210	8,400	240	9,600	240	9,600	255	10,200
Sterling,	280	10,080	290	200	10,000	210	10,500	190	9,500	200	10,000
Penn,	90	5,080	90	. . . .	.	. . . .	. . . .	. . .	. . . .	. . .	. . . .
Excelsior,	. . .	. . . .	. . .	306	12,852	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Reading,	. . .	. . . .	. . .	. . .	. .	. . . .	. . .	. . . .	. . . .	. . . .	. . .
St. Mary's,	250	12,844	240	150	6,300	150	6,300	160	6,720	160	6,720
St. Mary's,	260	12,264	255	160	6,720	180	8,988	180	8,988	160	6,720
Tanerdale,	210	10,206	220	250	6,768	260	7,008	250	6,768	240	6,528
Daguscahonda,	185	3,700	185	185	3,700	190	3,700	183	3,700	185	3,700
Moredale,	. . .	. . . .	. . .	100	5,565	. .	. . . .	. . . .	. . . .	. . .	. . . .
McIntyre,	220	7,602	222	150	5,856	160	5,856	150	5,565	150	5,565
McIutyre,	140	8,438	142	160	7,488	160	5,856	170	6,147	170	6,147
McIntyre,	170	15,982	170	200	6,867	180	6,867	200	7,488	180	6,867
Fall Brook,	180	9,405	196	200	5,000	180	4,500	195	4,875	170	4,250
Antrim,	150	6,105	. . .	70	5,136	65	4,944	65	4,944	55	4,416
Antrim,	. . .	. . . .	. . .	. . . .	. . . .	.	. . . .	. . . .	. . . .	. . . .	. . . .
Blossburg,	240	9,817	257	130	3,666	140	3,299	150	3,532	120	2,733
Blossburg,	330	12,844	310	180	5,278	170	4,987	160	4,695	160	4,696
Blossburg,	300	18,955	270	290	6,811	180	4,230	200	4,696	260	6,092
Morris Run,	220	22,770	211	70	3,500	80	4,000	85	4,250	100	5,000
Morris Run,	230	34,190	219	110	4,400	70	2,800	75	3,000	75	3,000
Morris Run,	215	22,410	218	70	2,800	120	4,800	120	4,800	110	4,400

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
...	72	620	22,320	450	16,200	520	18,361	510	18,560	18,860	Barclay, Bradford county.
63	72	590	21,240	565	17,855	460	16,560	520	18,720	18,019	Barclay, Bradford county.
...	40	315	...	325	..	250		260	11,680	...	Bennington, Blair county,
..	352	..	16,657	...	17,600	...	15,523	...	15,000	14,780	Bennington, Blair county.
89	38	300	11,400	325	12,350	350	13,300	350	13,300	12,587	Johnstown, Cambria county.
53	96	350	33,600	350	33,660	345	33,120	350	33,600	33,230	Johnstown, Cambria county.
...	36	...	...	...	..	...	..	..	..	....	Cameron, Cameron county.
65	35	50	1,750	65	2,275	50	1,750	60	2,100	1,966	Powelton, Centre county.
250	34	331	11,254	301	10,261	282	9,605	331	11,254	10,594	Snow Shoe, Centre county.
190	24	260	7,597	240	7,092	250	7,346	255	7,471	7,376	Houtzdale, Clearfield county.
183	33	310	12,266	285	11,392	290	11,566	300	11,916	11,785	Goss Run, Clearfield county.
137	72	220	12,144	260	14,016	250	13,536	240	13,056	13,188	Mapleton, Clearfield county,
105	33	130	5,412	120	5,082	120	5,082	140	5,742	5,329	Laurel Run, Clearfield county.
40	36	80	4,180	75	3,975	85	4,285	70	3,924	4,059	Decatur, Clearfield county.
...	28	90	9,050	68	7,000	100	9,030	98	9,210	....	Sonmon, Cambria county.
...	37	60	3,920	80	4,720	60	3,720	70	4,320	4,258	Morrisdale, Clearfield county.
...	35	50	3,382	70	4,104	50	3,382	50	3,383	3,582	Morrisdale, Clearfield county.
...	28	50	2,670	60	2,940	50	2,670	50	2,670	2,737	Morrisdale, Clearfield county.
550	35	300	10,500	350	12,250	325	11,375	275	9,645	10,942	Houtzdale, Clearfield county.
...	30	524	15,720	520	15,600	547	16,410	530	15,900	15,907	Goss Run, Clearfield county.
...	21	653	16,978	640	16,640	680	17,480	634	16,484	16,445	Goss Run, Clearfield county.
130	48	320	15,360	300	14,400	360	16,320	300	14,400	15,120	Du Bois, Clearfield county.
241	40	300	12,000	280	11,200	310	12,400	210	9,600	11.300	Sterling, Clearfield county.
205	50	300	15,000	300	15,000	270	13,500	290	14,000	14,375	Sterling, Clearfield county.
...	16	320	6,125	320	6,125	320	6,125	320	6,125	6,125	Houtzdale, Clearfield county.
...	36	543	19,548	..	....	...	.	...	....	....	Houtzdale, Clearfield county.
...	...	...	....	...	..	...	....	...	....	....	Mapleton, Clearfield county.
155	16	200	3,644	280	4,976	260	4,672	260	4,672	4.491	St. Mary's, Elk county.
170	16	260	4,672	240	4,352	250	4,976	290	5,736	4,784	St. Mary's, Elk county.
250	24	350	9,096	350	9,096	340	8,856	310	8,856	8,976	St. Mary's. Elk county.
185	36	255	7,650	260	7,800	257	7,710	250	7,500	7,490	Daguscahonda, Elk county.
	...	...	...	...	....	...	.	...	....	....	Moredale Huntingdon county
152	45	260	15,778	260	15,778	270	16,302	270	16,302	16,040	McIntyre, Lycoming county.
165	45	260	15,778	260	15,778	270	16,302	270	16,302	16,040	McIntyre, Lycoming county.
190	42	270	16,906	200	16,374	270	16,906	260	16,374	16,610	McIntyre. Lycoming county.
186	42	360	20,160	365	20,440	355	19,880	370	2,720	20,300	Fall Brook, Tioga county.
63	35	470	17,325	430	15,995	380	14,280	390	14,630	15,600	Antrim, Tioga county.
...	27	260	7,884	270	8,127	210	6,561	220	6,831	8,020	Antrim. Tioga county.
135	72	145	10,206	150	10,556	160	11,234	75	6,218	9,608	Arnot, Tioga county.
169	40	320	12,456	300	11,680	300	11,680	310	12,068	11,971	Arnot, Tioga county.
232	70	310	21,129	170	12,340	315	14,818	205	15,427	15,678	Arnot, Tioga county.
84	72	430	32,904	420	32,184	400	30,816	440	33,624	....	Morris Run, Tioga county.
73	66	440	30,822	430	30,162	450	31,482	460	32,076	....	Morris Run, Tioga county.
115	52	450	24,752	460	25,272	430	23,764	440	24,284	....	

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
William Grant, ...	50	Married, . .	. . . .	April 3, 1878, .	. . . .
David Williams, ...	20	Single, . . .	. . . .	April 8, 1878, .	. . . .
James Smith, ...	52	Married, . .	. . . .	April 13, 1878,	. . . .
J. Eickersley, ...	40	Single, . . .	. . . .	April 17, 1878,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held &c., in said district, for the month of April, 1878:

NATURE OF ACCIDENT.	REMARKS.
Body bruised,	By a fall of coal at Rolling mines, Johnstown, Cambria county, Cambria Iron Company.
Leg and rib broken,	By fall of coal at Sterling mines, Sterling, Clearfield county, Robert Hare Powell & Co.
Shoulder injured,	At Eureka mines, Houtzdale, Clearfield county, Berwind, White, & Co.
Leg bruised,	By fall of coal at Penn mines, Houtzdale, Clearfield county, Reakirt Brothers & Co.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Porter,	Deniston, Porter & Co.,	Semi-bitum.	. .	. .	1	. .	. .	3	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	6	
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	.	1	. .	. .	1	6	.
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Souman,	Dysart & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Mount Hope,	Mount Hope Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Snow Shoe,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	.	1	. .	. .	. .	3	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	4	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	. .	3	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	10	1
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Co., (limited,)	Semi-bitum.	. .	1	. .	. .	1	12	. .
Webster,	Webster Coal Co., (limited,)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Laurel Run,	John Nuttall & Co.,	Bituminous,	. .	1	. .	. .	1	6	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Sandy Lick,	Sandy Lick Gas Coal Company,	Bituminous,	. .	1	. .	. .	1	3	1
Rochester,	Bell, Lewis & Yates,	Bituminous,	. .	1	. .	.	1	8	. .
Penn,	Reakirt & Bros.,	Bituminous,	. .	1	. .	. .	1	5	. .
Sterling,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Sterling,	Robert Hare Powell & Co.,	Semi-bitum.		1	. .	. .	1	. .	. .
Excelsior,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	5	. .
Powelton,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	. .	. .	. .
Silver Creek,	D. Eldridge,	Bituminous,	. .	1	. .	. .	1	4	. .
Cascade,	Kaul & Haul,	Bituminous,	. .	1	. .	. .	1	2	. .
St. Mary's,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	2	. .
Tannerdale,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	1	. .
Daguscahonda,	N. W. Mining and Ex. Company,	Bituminous,	. .	2	. .	. .	1	4	. .
Fisher,	Fisher & Miller,	Semi-bitum.	. .	1	. .	. .	. .	2	. .
Moredale,	Reakirt Bros. & Co.,	Semi-bitum.	.	1	. .	. .	. .	2	. .
Robertsdale,	Rockhill Iron and Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Robertsdale,	Rockhill Iron and Coal Company,	Semi-bitum.	. .	1	. .	. .	1	1	1
Carbon,	J. F. Mears,	Semi-bitum.	. .	1	. .	. .	. .	5	. .
Clermont,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	2	.	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	.	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Aruot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of May, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	208	56	74	338	59	11	14,379	2	60	120	4,104	400	13,650	340	11,628
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	50	100	10,440	130	8,515	100	6,550
. .	. .	. .	121	35	25	181	16	5	11,679	3							
1	20	2	39	10	21	70	10	1	2,900	2	30						
3	108	7	112	23	42	177	20	. .	7,000	4	140	135	19,000	168	23,500	160	22,350
. .	. .	. .	180	77	54	311	27	. .	11,122	3	90	90	8,100	95	8,500	98	8,550
2	50	2	75	40	34	149	18	1	2,811	2	88	132	11,616	135	11,880	113	11,880
. .	. .	. .	16	1	1	18	1	1	940	2	36	50	1,800	55	1,980	50	1,800
. .	. .	. .	64	10	16	90	6	2	431	2	51	180	9,640	179	9,581	185	9,498
. .	. .	. .	40	5	9	54	5	. .	2,000	2	37	200	10,425	190	9,903	210	10,947
. .	. .	. .	44	5	11	60	8	4	2,137	7	33	482	9,322	292	9,612	272	9,002
. .	. .	. .	117	31	31	179	19	. .	8,981	2	56	175	12,480	170	12,191	180	12,768
. .	. .	. .	29	4	7	40	3	.	2,077	2	56	150	10,388	145	10,116	140	9,844
. .	. .	. .	40	17	14	71	5	1	3,037	2	42	350	15,476	330	14,658	330	14,808
. .	. .	. .	46	10	11	67	5	1	2,339	2	57	300	31,000	310	32,000	290	29,000
. .	. .	. .	41	4	9	57	5	1	1,768	2	57	200	21,060	300	21,960	190	20,160
. .	. .	. .	129	40	10	243	12	6	7,300	2	90	150	11,631	150	11,651	120	10,174
. .	. .	. .	. . .	. .	. . .	. . .	. . .	. .	. . .	. . .	78	140	9,511	130	9,091	100	7,832
1	. .	1	171	42	3	216	14	2	8,802	3	30	150	4,500	175	5,250	125	3,750
. .	. .	. .	200	10	15	225	18	8	9,799	2	61	600	36,600	550	33,550	600	36,600
. .	. .	. .	108	37	22	167	7	2	3,350	2	43	260	11,960	275	12,650	280	12,880
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . .	. . .	43	233	10,485	241	10,800	243	10,935
. .	. .	. .	35	8	6	49	3	2	2,110	2	34	120	5,236	140	5,916	130	5,576
. .	. .	.	28	8	2	38	3	.	2,542	2	36	110	5,184	100	4,824	95	4,641
. .	. .	2	48	. . .	9	57	4	2	. . . .	2	42	225	9,450	225	9,450	250	10,500
. .	. .	.	85	7	9	101	5	. .	5,171	2	48	300	14,400	300	14,400	300	14,400
. .	. .	. .	30	4	5	39	3	2	1,471	2	40	90	5,080	90	5,080	90	5,080
. .	. .	. .	. . .	. . .	. . .	. . .	.	. .	. . . .	4	36	500	18,000				
1	12	1	209	21	31	261	16	. .	4,000	5	51	310	15,110				
. .	. .	. .	146	5	13	164	5	4	10,000								
. .	. .	. .	. . .	. . .	. . .	.	. . .	. .	. . . .	3	33	75	2,475	60	1,980	80	2,640
. .	. .	. .	80	20	10	110	. . .	6	4,000	4	30	150	4,500	200	6,000	160	4,800
1	. .	1	28	5	5	38	. . .	.	1,840	2	42	150	5,760	150	5,760	150	5,760
.	. .	. .	50	15	10	75	2	4	4,800	2	42	180	8,820	175	8,778	180	8,820
. .		. .	16	4	4	24	1	1	900	2	42	168	8,484	170	8,568	162	8,375
1	30	2	75	5	15	95	4	. .	5,800	2	30	185	5,500	185	5,500		
.	. .	. .	18	6	3	27	1	1	772	2	42	160	. . . .	150	. . . .	160	
. .	. .	. .	13	3	2	18	1		801	2	42	150	6,300	180	7,560	140	5,880
. .	. .	. .	47	6	22	101	10	4	. .	3	35						
. .	. .	1	73	3	8	58	7	3	8,121	. . .	. . .	224	7,840	224	7,840	224	7,840
. .	. .	. .	30	10	7	47	4	1	489	2	40						
. .	. .	. .	120	. . .	12	132	8	. .	5,316	4	31	. . .	. . . .	636	. . . .	579	
1	6	1	59	5	28	92	9	1	12,041	2	30	220	7,602	240	8,184	240	8,184
. .	. .	. .	80	10	33	123	14	2	. . . .	2	48	140	8,438	200	11,232	190	10,766
. .	. .	. .	83	20	15	118	6	. .	. . . .	2	78	170	15,932	160	15,225	140	13,712
. .	. .	. .	34	10	6	50	3	. .	10,608	3	30	. . .	. . .	534	16,025	520	15,600
. .	. .	. .	65	39	29	133	10	. .	. . . .	4	46	528	27,580	510	26,647	515	26,908
. .	. .	. .	210	40	100	300	24	. .	9,288								
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . .	. . .	33	160	6,435	160	6,435	170	6,732
. .	. .	. .	241	114	60	415	51	1	. . . .	. . .	42	400	16,800	393	16,506	412	17,304
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	. . .	40	483	19,320	537	21,480	590	23,600
. .	. .	. .	. . .	. .	. . .	. . .	. . .	. .	. . . .	. . .	65	427	27,885	447	28,855	447	28,855
2	40	2	52	34	25	111	10	. .	2,274	3	90	250	22,500	240	21,600	260	22,400
. .	. .	. .	29	21	26	76	15	2	4,329	3	130	250	32,500	240	31,200	250	32,500
1	20	1	83	59	30	172	17	. .	5,973	2	90	260	23,400	250	22,500	240	21,600

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	230	7,860	272	71	2,840	103	4,120	115	4,600	108	4,320
Barclay,	110	7,205	110	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Carbon Run,	. . .	. . .	. . .	67	210	72	216	69	217	89	267
Carbon Run,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Carbon Run,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Porter,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bennington Shaft,	165	23,200	157	108	4,553	115	4,820	117	4,921	103	4,322
Rolling-Mill Mine,	95	8,556	94	75	3,375	75	3,375	78	3,510	75	3,375
Blast Furnace Mine,	135	11,880	133	60	5,760	62	5,952	54	5,184	50	4,800
Conemaugh Mine,	50	1,800	33	30	1,170	35	1,365	35	1,365	30	1,170
Sonman,	186	9,689	184	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Mount Hope,	195	10,164	199	155	3,875	150	3,750	165	4,125	155	3,875
Snow Shoe,	301	9,962	316	278	8,184	282	8,475	263	7,893	292	8,766
Eureka,	175	12,480	175	195	5,499	200	5,616	210	5,848	200	5,616
Goss Run,	160	8,691	140	190	9,532	180	9,120	190	9,532	185	9,326
Mapleton,	350	15,556	340	130	5,312	150	5,920	120	4,922	130	5,312
Moshannon,	250	26,000	287	70	3,500	70	3,500	60	3,000	70	3,500
Moshannon,	200	21,060	200	80	3,200	80	3,200	80	3,200	80	3,200
Morrisdale,	90	8,667	128	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Morrisdale,	110	8,255	119	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Franklin,	120	3,600	142	110	4,400	90	3,600	100	4,000	80	3,200
Ocean,	600	36,600	587	600	. . .	600	. . .	. . .	. . .	. . .	. . .
Webster,	270	12,420	271	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Webster,	236	10,620	238	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Laurel Run,	120	5,236	127	90	4,464	100	4,824	110	5,284	110	5,284
Decatur,	115	5,364	105	70	3,276	60	2,961	80	3,591	50	2,646
Sandy Lick,	225	9,450	. . .	125	5,000	125	5,000	140	5,600	125	5,000
Rochester,	300	14,400	296	290	12,180	290	12,180	290	12,180	290	12,180
Penn,	90	5,080	90	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sterling,	. . .	. . .	500	200	10,000	. . .	. . .	. . .	. . .	. . .	. . .
Sterling,	. . .	. . .	310	230	11,730	. . .	. . .	. . .	. . .	. . .	. . .
Excelsior,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Powelton,	55	1,815	70	30	1,200	30	1,200	45	1,800	35	1,400
Silver Creek,	180	5,400	173	100	2,700	77	2,079	83	2,241	75	2,025
Cascade,	150	5,760	150	100	4,600	100	4,600	100	4,600	100	4,600
St. Mary's,	185	9,198	180	190	9,408	195	9,618	198	9,702	198	9,702
Tannerdale,	168	8,484	167	195	8,015	198	8,120	189	7,805	195	8,015
Daguscahonda,	190	5,700	187	180	5,400	180	5,400	. . .	. . .	185	5,500
Fisher,	140	. . .	152	120	. . .	120	. . .	130	. . .	140	. . .
Moredale,	160	6,700	157	120	5,000	120	5,000	100	4,200	110	4,600
Robertsdale,	224	7,840	240	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Robertsdale,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Carbon,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Clermont,	580	. . .	598	. . .	. . .	400	9,000	440	10,560	359	8,795
McIntyre,	240	8,184	235	150	5,565	160	5,856	160	5,856	160	5,856
McIntyre,	190	10,766	180	160	5,856	170	6,147	170	6,147	170	6,147
McIntyre,	140	13,712	152	200	7,488	200	7,488	180	6,867	180	6,869
Fall Brook,	510	15,305	521	. . .	. . .	120	2,400	115	2,300	150	3,000
Fall Brook,	490	25,643	511	250	7,500	275	8,250	260	7,800	265	7,950
Antrim,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Antrim,	160	6,435	165	55	4,416	65	4,944	55	4,416	65	4,944
Arnot,	420	18,240	406	200	4,800	190	4,560	190	4,560	480	5,040
Arnot,	465	18.600	518	309	9,120	304	9,120	286	8,580	210	9,660
Arnot,	411	26,712	433	537	12,880	505	12,120	391	9,384	322	11,520
Morris Run,	250	22,500	250	75	3,750	90	4,500	85	4,250	109	5,500
Morris Run,	230	29,900	243	80	3,200	85	3,400	80	3,200	100	4,000
Morris Run,	260	23,400	252	120	4,800	125	5,000	120	4,800	125	5,000

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
99	72	300	10,800	320	11,530	350	12,600	330	11,880	11,700	Barclay, Bradford county.
. . .	72	320	11,320	250	9,000	300	7,200	260	9,360	9,270	Barclay, Bradford county.
74	121	300	36,905	233	28,193	230	27,830	295	35,695	32,156	Carbon Run, Bradford county
. . .	31	288	9,072	198	6,237	218	6,867	228	7,288	7,354	Carbon Run, Bradford county
. . .	50	89	4,450	94	4,700	119	5,950	109	5,450	5,137	Carbon Run, Bradford county
. . .	40	225	8,900	250	9,250	225	8,900	225	8,900	. . . .	Bennington, Blair county.
111	352	42	15,000	53	18,700	51	17,830	53	18,600	17,522	Bennington, Blair county.
75	38	300	11,400	325	12,350	333	12,051	350	11,300	14,426	Johnstown, Cambria county.
57	61	340	20,740	350	21,350	340	20,735	350	21,300	21,095	Johnstown, Cambria county.
33	31	78	2,740	85	2,735	85	2,745	50	2,135	2,570	Johnstown, Cambria county.
. . .	28	310	8,680	285	8,570	291	8,610	278	8,418	8,560	Sonman, Cambria county.
136	37	225	9,450	240	1,080	235	9,870	220	9,180	9,895	Cameron, Cameron county.
270	31	301	10,264	311	10,594	292	9,934	321	10,921	10,429	Snow Shoe, Centre county.
210	24	255	7,471	250	7,345	260	7,957	255	7,471	7,471	Houtzdale, Clearfield county.
186	32	290	11,566	285	11,392	290	11,566	305	12,090	11,654	Goss Run, Clearfield county.
132	48	240	13,056	210	11,664	230	12,624	220	12,144	12,371	Mapleton, Clearfield county.
68	40	400	30,816	420	32,181	380	29,661	400	30,816	30,[illegible]90	Sobieski, Clearfield county.
80	40	500	31,650	480	33,482	440	30,822	480	30,395	30,000	Sobieski, Clearfield county.
. . .	44	330	8,994	310	10,460	170	6,873	130	5,950	8,070	Morrisdale, Clearfield county.
. . .	63	140	11,114	140	11,114	100	7,291	130	10,521	9,960	Morrisdale, Clearfield county.
90	30	500	17,500	500	17,500	450	15,750	475	16,625	16,938	Houtzdale, Clearfield county.
. .	40	620	27,900	620	27,900	620	27,900	620	27,900	27,900	Goss Run, Clearfield county.
. .	24	653	17,631	660	14,820	661	17,928	650	17,550	17,772	Goss Run, Clearfield county.
. . .	30	524	15,720	530	15,900	532	15,960	525	15,750	15,832	Goss Run, Clearfield county.
102	33	110	4,752	130	5,540	120	5,082	112	4,830	5,019	Laurel Run, Clearfield county
65	36	90	4,464	75	3,921	75	3,921	105	5,004	4,329	Decatur, Clearfield county.
. . .	42	225	9,450	225	9,450	250	10,500	225	9,450	. .	Du Bois, Clearfield county.
290	42	320	13,440	320	13,410	320	13,400	320	13,440	13,410	Du Bois, Clearfield county.
. . .	16	320	6,125	320	6,125	320	6,125	320	6,125	6,125	Houtzdale, Clearfield county.
200	100	200	20,000	. .	. . . .	. . .	. . . .	. . .	. .	20,000	Sterling, Clearfield county.
310	80	200	16,000	. . .	. . .	. . .	. . . .	. . .	. . . .	16,000	Sterling, Clearfield county.
. . .	. . .	. . .	. .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Goss Run, Clearfield county.
43	20	120	2,400	100	2,000	110	2,200	120	2,400	2,250	Powelton, Centre county.
84	36	160	1,820	195	2,340	170	2,040	170	2,040	2,000	St. Mary's, Elk county.
100	24	280	5,620	280	5,620	280	5,620	280	5,620	5,620	St. Mary's, Elk county.
195	30	250	8,460	245	8,310	260	8,760	250	8,460	8,497	St. Mary's, Elk county.
194	21	293	7,776	300	7,944	283	7,586	291	7,728	7,746	St. Mary's, Elk county.
180	30	250	7,500	250	7,500	. . .	.	260	7,800	7,600	Daguscahonda, Elk county.
127	36	150	. . . .	140	. . .	140	. . .	150	. . .	. . .	Dudley, Huntingdon county.
112	. . .	. . .	. . .	.	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Moredale, Huntingdon co.
. . .	. . .	. . .	. . .	.	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Robertsdale, Huntingdon co.
. . .	. . .	. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . . .	. . . .	Robertsdale, Huntingdon co.
. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . . .	. . .	Broad Top, Huntingdon co.
400	37	. . .	. . . .	440	16,636	392	14,817	380	14,362	15,271	Clermont, McKean county.
157	20	. .		200	9,828	200	9,828	200	9,828	11,305	McIntyre, Lycoming county.
169	21	260	15,778	250	13,560	230	12,628	230	12,628	13,618	McIntyre, Lycoming county.
190	42	260	16,394	240	15,276	220	14,190	220	14,190	15,007	McIntyre, Lycoming county.
128	28		. . .	570	15,960	550	15,400	540	15,120	13,493	Fall Brook, Tioga county.
262	57	530	31,800	520	31,202	525	31,500	500	30,000	31,125	Fall Brook, Tioga county.
. . .	35	390	14,630	400	14,980	410	15,295	380	14,280	14,600	Antrim, Tioga county.
60	27	230	7,040	270	8,127	240	7,341	270	8,127	7,800	Antrim, Tioga county.
197	75	170	12,750	161	12,075	180	13,500	190	14,250	13,143	Arnot, Tioga county.
304	40	537	21,480	501	20,040	519	20,760	554	22,160	21,110	Arnot, Tioga county.
478	70	456	31,920	447	31,290	447	31,290	402	28,140	30,110	Arnot, Tioga county.
90	72	510	36,720	500	36,000	540	38,880	510	36,720	37,000	Morris Run, Tioga county.
86	66	500	33,000	490	32,340	510	33,660	470	31,020	32,000	Morris Run, Tioga county.
123	52	570	29,640	560	21,120	490	25,480	570	29,640	22,460	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several collieries*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
James Cann, ...	. . .	Married, . .	. . . .	May 2, . . .	. . . .
John K. Cameron, . . .	. . .	Married, . .	. . . .	May 15, . . .	. . . .
Patrick Costello, . . .	35	Married, . .	. . . .	May 5, . . .	. . . .
James Scanlon, ...	27	Single, . .	. . . .	May 15, . . .	. . . .

James Scanlon, killed at Sonman colliery, May 15, 1878. Coroner held an inquest, which resulted as follows: Deceased came to his death by accident, caused by his own carelessness, in not taking down drawn slate.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of May, 1878.

NATURE OF ACCIDENT.	REMARKS.
Leg broken,	At Eureka colliery, Berwind, White & Co., Houtzdale, Clearfield county.
Foot bruised,	At Eureka colliery, Berwind, White & Co., Houtzdale, Clearfield county.
Knee hurt,	By fall of coal, at Morris Run colliery, Morris Run Coal Mining Company, Morris Run, Tioga county.
Killed,	By fall of slate, at Sonman colliery, Dysart & Co., Sonman, Cambria county.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fans.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	.
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	.	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Porter,	Denniston, Porter & Co.,	Semi-bitum.	. .	. .	1	. .	. .	3	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	6	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Blast Furnace Mine,	. . .	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	. . .	Semi-bitum.	. .	1	. .	. .	1	1	. .
Lloyd's,	Bell's Gap Railroad Company,	Bituminous,	. .	1	. .	1	. .	. .	. .
Mount Hope,	C. Elias & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Sonman,	Dysart & Co.,	. . .	. .	1	. .	. .	1	4	. .
Snow Shoe,	Bellefonte & Snow Shoe R. R. Co.	Bituminous,	. .	1	. .	. .	. .	3	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	2
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	10	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Laurel Run,	John Nuttall & Co.,	Bituminous,	. .	1	. .	. .	1	6	. .
Reading,	Richard J. Hughes & Co.,	Bituminous,	. .	1	. .	. .	1	. .	. .
Sterling, No. 2,	R. H. Powell,	Semi-bitum.	. .	1	. .	. .	. .	5	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	. .	. .
Penn,	Reakirt Brothers & Co.,	Bituminous,	. .	1	. .	. .	1	3	. .
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Excelsior,	Fisher Brothers & Miller,	Bituminous,	. .	1	. .	. .	1	6	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Sandy Lick,	John Murphy & Co.,	Bituminous,	. .	1	. .	. .	1	. .	1
St. Mary's,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	2	. .
Tannerdale,	St. Mary's Coal Company,	Bituminous,	. .	. .	. .	. .	. .	1	. .
Silver Creek,	D. Eldridge,	Bituminous,	. .	1	. .	. .	1	5	2
Cascade,	Kaul & Hall,	Bituminous,	. .	1	. .	. .	1	2	. .
Daguscahonda,	N. W. Mining and Ex. Company,	Bituminous,	. .	1	. .	. .	1	5	
Robertsdale,	Rockhill Iron and Coal Company,	Semi-bitum.	. .	4	. .	. .	. .	2	1
Fisher,	Fisher & Miler,	Semi-bitum.	.	1	. .	. .	. .	4	. .
Mooredale,	Reakirt Brothers & Co.,	Semi-bitum.	. .	1	. .	. .	. .	1	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	7	. .
Clermont,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsylva-
of June, 1878.

Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
										Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	204	56	73	333	59	11	. . . .	2							
. .	. .	. .	. . .	. . .	.	. .	. . .	. .	.	1							
. .	. .	. .	125	35	25	185	16	5	13,329								
1	20	2	31	12	22	55	10	1	2,311	2							
3	108	7	110	23	42	175	20	. .	8,000	4	140	171	24,000	164	22,800	157	22,000
. .	. .	. .	187	53	57	297	28	. .	10,757	3	90	95	8,550	90	8,100	95	8,550
2	50	2	78	20	33	131	19	1	3,211	2	88	175	1,540	150	13,200	150	13,200
. .	. .	. .	16	1	1	18	1	1	900	2	36	50	1,800	55	1,980	50	1,800
. .	. .	2	75	8	12	95	6	6	6,537	2	35	440	15,400	455	15,740	440	15,400
. .	. .	. .	44	3	7	54	4	. .	3,800	2	38	200	10,425	190	9,903	210	10,947
. .	. .	. .	70	10	16	96	6	2	6,844	2	54	200	10,640	208	10,876	205	10,837
. .	. .	. .	38	3	10	51	7	4	932	7	33	282	9,322	292	9,642	272	9,002
1	.	1	180	36	10	216	15	2	7,657	3	30	200	6,000	175	5,250	180	5,400
. .	. .	.	112	33	27	172	19	. .	6,575	2	56	160	11,164	175	12,480	160	11,614
. .	. .	. .	24	5	7	36	3	.	1,847	2	56	140	9,844	150	10,338	145	10,116
. .	. .	. .	46	17	14	77	5	1	1,999	2	72	320	14,388	388	15,876	370	16,176
. .	. .	.	27	8	2	37	3	. .	1,525	2	36	124	4,464	134	4,824	154	5.544
. .	. .	. .	27	8	6	41	3	2	1,745	2	34	154	5,236	149	5,066	149	5,066
. .	. .	. .	20	3	4	27	1	1	1,600								
. .	. .	. .	80	10	8	98	6	. .	10,500	4	40	260	10,400	200	8,000	210	8,400
. .	. .	. .	200	10	15	225	18	8	9,799	2	61	600	36,600	550	33,550	600	36,600
. .	. .	. .	35	7	5	47	3	2	1,824	2	40	95	5,280	95	5.280	93	5,200
. .	. .	. .	114	26	30	170	8	2	6,979	2	43	260	11,960	245	11,270	265	12,190
.	. .	. .	. .	. . .	. . .	. . .	. . .	. .	. .	2	43	230	10,350	220	9,000	235	10,125
. .	. .	. .	150	6	7	163	6	5	8,540	2	48	460	22,080	465	22,320	470	22,560
.	. .	. .	34	4	6	43	4	1	1,041	2	57	100	10,530	. . .	. . .	90	10,080
. .	. .	2	30	. . .	8	38	4	2	2,600	2	42	200	10,500	225	9,480	250	10,500
. .	. .	. .	50	15	8	73	2	4	6,900	2	42	180	8,988	185	9,188	199	9,324
. .	. .	. .	16	4	4	24	2	1	1,000	2	42	168	8,424	170	8.568	162	8,274
. .	. .	.	87	7	7	101	. .	5	3,137	3	30	220	6,600	190	5,700	250	7,500
1	. .	. .	28	6	7	41	. . .	. .	1,688	2	42	150	6,300	150	6,300	150	6,300
1	30	2	75	10	2	87	4	. .	5,800	2	30	250	7,500	250	7,500	260	7,800
1	. .	1	292	18	60	370	34	14	8,654	4	35	220	7,820	220	7,820	220	7,820
. .	. .	. .	20	3	3	26	1	1	700	2	42	140	5,890	145	6,000	140	5,890
. .	.	. .	26	4	4	34	2	2	1,193	2	42	160	6,720	150	6,720	150	6,300
1	6	1	47	4	16	67	7	1	14,544	2	30	220	7,602	220	7,602	220	7,602
. .	. .	. .	91	15	33	139	14	2	. . . .	3	48	190	10,766	200	11,232	200	11,232
. .	. .	. .	100	20	20	140	7	.	. . . .	4	78	140	13,712	170	15,982	170	15,982
. .	. .	. .	110	15	4	140	9	. .	5,043	3	30						
. .	. .	. .	194	26	20	340	21	. .	7,503								
. .	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . .	. . .	33	286	9,438	220	7,260	230	7,590
. .	. .	. .	34	10	6	50	4	. .	2,159	3	30	550	16,500	540	16,200	520	15,600
. .	. .		64	39	29	132	14	. .	8,375	4	50	500	26,525	530	27,692	515	26,908
. .	. .	. .	242	114	60	416	51	1	. . .	. . .	42	650	27,300	895	37,590	1,074	45,108
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	. . .	40	358	14,320	214	8,560	125	5,000
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	. . .	65	483	31,395	447	29,055	429	27,885
2	40	2	52	34	25	111	10	. .	3,138	3	90	260	23,400	250	22.500	260	23,400
. .	. .	. .	29	21	26	76	15	2	5,415	3	130	250	32,500	260	33,800	240	31,200
1	20	1	83	59	30	172	17	. .	7,908	2	90	250	22,500	260	23,400	240	21,600

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	. . .	. . .	. . .	120	5,760	100	4,800	130	6,240	110	5,280
Barclay,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Carbon Run,	. . .	. . .	. . .	78	234	67	210	88	264	69	207
Carbon Run,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	109	1,208	139	1,606
Carbon Run,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Porter,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Bennington Shaft,	205	28,800	174	97	4,060	81	3,400	100	4,200	104	4,400
Rolling-mill Mine,	90	8,100	92	80	3,600	75	3,375	78	3,510	75	3,375
Blast Furnace Mine,	160	14,080	161	55	5,280	50	5,568	57	5,472	55	5,280
Conemaugh Mine,	50	1,800	48	30	1,170	30	1,170	35	1,365	75	1,170
Lloyd's,	450	15,740	570	350	10,000	350	10,500	330	9,800	310	9,800
Mount Hope,	195	10,164	199	155	3,875	150	3,750	165	4,125	150	3,875
Sonman,	206	11,190	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Snow Shoe.	301	9,962	300	278	8,800	282	8,475	263	7,893	292	8,766
Franklin,	200	6,000	188	50	2,000	60	2,400	70	2,800	90	3,600
Eureka,	180	12,768	168	180	5,150	200	5,616	210	5,848	220	6,081
Goss Run,	150	10,388	146	185	7,626	180	9,120	190	9,532	180	9,120
Mapleton,	370	16,056	360	130	5,312	150	5,920	140	5,600	130	5,312
Decatur,	144	5,184	139	94	3,300	114	3,648	134	4,288	114	2,648
Laurel Run,	164	5,576	154	144	4,032	174	4.872	144	4,032	129	3,612
Reading,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Sterling, No. 2,	255	10,200	250	80	4,800	100	6,000	70	4,200	75	4,500
Ocean,	600	36,600	580	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Penn,	93	5,200	92	60	3,920	60	3,920	60	3,920	60	3,920
Webster,	272	12,372	260	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Webster,	240	10,800	231	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Excelsior,	470	22,560	465	265	7,950	260	7,800	275	8,250	270	8,100
Moshannon,	. . .	. . .	95	35	3,500	. . .	. . .	30	1,500	. . .	. . .
Sandy Lick,	225	9,450	220	125	5,250	112	4,725	125	5,250	112	4,725
St. Mary's,	180	9,888	183	188	9,324	200	9,828	188	9,324	190	9,408
Tannerdale,	168	8,424	167	195	6,825	198	6,930	189	6,615	195	6,825
Silver Creek,	270	8,100	233	150	4,050	170	4,590	180	4,860	170	4,590
Cascade,	150	6.300	150	110	3,300	110	3,300	110	3,300	. . .	. . .
Daguscahonda,	245	7,350	252	265	7,800	260	7,800	280	8,400	260	7,800
Robertsdale,	220	7,820	220	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Fisher,	140	5,890	141	130	3,000	130	3,000	130	3,000	135	3,400
Mooredale,	160	6,300	159	110	. . .	100	. . .	100	. . .	100	. . .
McIntyre,	220	7,602	200	150	5,565	150	5,565	150	5,565	150	5,565
McIntyre,	230	12,628	205	170	6,147	160	5,856	160	5,856	160	5,856
McIntyre,	170	15,982	162	180	6,867	200	7,488	200	7,488	200	7,488
Clermont,	. . .	. . .	. . .	450	9,000	463	9,260	417	8,340	. . .	. . .
Antrim,	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
Antrim,	240	7,920	244	220	6,160	200	5,600	205	574	210	5,880
Fall Brook,	535	16,050	536	175	3,500	190	3,800	180	3,600	195	3,900
Fall Brook,	505	26,835	512	275	7,700	310	8,680	290	8,120	270	7,560
Arnot,	805	34,010	856	260	8,060	300	9,300	280	8,680	240	7,440
Arnot,	268	10,720	241	304	9,120	358	10,740	393	11,790	375	11,259
Arnot,	322	20,930	412	358	8,592	465	11,160	411	9,864	537	1,288
Morris Run,	240	21,600	253	80	4,000	90	4,500	90	4,500	100	5,000
Morris Run,	260	33,800	253	75	3,000	80	3,200	75	3,000	90	3,600
Morris Run,	260	23,400	253	120	4,800	130	5,200	110	4,400	140	5,600

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

Ventilation.											
		1st week.		2d week.		3d week.		4th week.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	Location.
40	41	42	43	44	45	46	47	48	49	50	51
115	72	450	16,200	460	17,560	398	14,328	430	13,480	15,642	Barclay, Bradford county.
. . .	61	420	18,375	300	14,830	395	17,940	380	17,925	16,009	Barclay, Bradford county.
75	121	241	29,161	224	27,104	279	33,759	436	52,756	35,695	Carbon Run, Bradford county
124	31	230	7,528	219	7,843	239	7,528	229	7,203	7,528	Carbon Run, Bradford county
. . .	50	89	4,450	89	4,450	118	5,900	138	6,900	5,425	Carbon Run, Bradford county
.	40	260	11,680	300	13,200	290	12,840	260	11,680	. . . .	Bennington, Blair county.
95	352	58	20,574	52	18,600	47	15,750	62	22,000	19,230	Bennington, Blair county.
77	38	350	13,300	325	12,350	350	13,300	350	13,300	13,062	Johnstown, Cambria county.
56	61	340	20,740	350	21,350	350	21,350	350	21,350	21,190	Johnstown, Cambria county.
34	31	78	2,418	78	2,418	85	2,635	78	2,418	2,472	Johnstown, Cambria county.
345	33	470	15,500	480	15,830	500	16,500	490	16,700	16,000	Lloyd, Cambria county.
156	38	225	9,450	240	10,080	235	98,570	220	9,480	9,985	Cameron, Cameron county.
. . .	28	330	9,000	340	9,560	328	9,620	350	9,835	. . .	Sonman, Cambria county.
270	34	301	10,264	311	10,591	292	9,954	324	10,924	10,429	Snow Shoe, Centre county.
67	35	450	15,750	475	16,625	500	17,500	450	15,750	16,406	Houtzdale, Clearfield county.
203	24	250	7,345	300	8,608	290	8,353	280	8,401	8,102	Houtzdale, Clearfield county.
183	82	280	11,217	260	10,519	285	11,392	295	11,741	11,217	Goss Run, Clearfield county.
137	48	220	12,144	260	14,016	250	13,536	230	12,624	13,080	Mapleton, Clearfield county.
114	36	134	4,824	154	5,541	164	5,904	141	5,184	5,364	Decatur, Clearfield county.
147	36	144	5,184	144	5,184	144	5,184	154	5,581	5,274	Laurel Run, Clearfield county
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .		. . . . .	. . . . .	Reading, Clearfield county.
70	36	160	11,520	140	10,080	145	10,340	120	9,040	10,245	Sterling, Clearfield county.
. . .	45	620	27,900	620	27,900	620	27,900	620	27,900	27,900	Goss Run, Clearfield county.
60	20	320	6,125	320	6,125	320	6,125	320	6,125	6,125	Houtzdale, Clearfield county.
. . .	24	630	17,631	640	17,280	667	18,009	680	18,360	17,820	Goss Run, Clearfield county.
. . .	30	520	15,600	504	15,120	526	15,780	538	16,640	15,725	Goss Run, Clearfield county.
270	36	590	21,240	560	20,160	565	20,340	580	20,880	20,655	Goss Run, Clearfield county.
33	40	200	15,000	. . .	. . . .	210	16,000	. . .	. . . .	15,050	Moshannon, Clearfield county
145	. . .	250	10,500	225	9,450	250	10,500	225	9,450	9,420	Du Bois, Clearfield county.
191	24	220	6,072	240	6,528	245	6,648	250	6,658	6,504	St. Mary's, Elk county.
195	24	293	7,344	294	7,800	281	7,488	293	7,776	7,062	St. Mary's, Elk county.
167	12	210	2,520	350	4,500	320	3,840	400	4,800	4,200	St. Mary's, Elk county.
. . .	24	235	5,520	235	5,520	235	5,520	235	552	5,520	St. Mary's, Elk county.
270	30	280	8,400	270	8,090	300	9,000	280	8,400	8,100	Daguscahonda, Elk county.
. .	. . .	. . .	. . . .	. . .	. . .	. . .	. . . .	. . .	. . .	. . . .	Robertsdale, Huntingdon co.
131	36	140	5,260	140	5,260	135	4,820	130	4,020	4,960	Moredale, Huntingdon co.
. . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . .	. .	. .	. . . .	Moredale, Huntingdon co.
150	20	200	9,828	200	9,828	200	9,828	200	9,828	9,828	McIntyre, Lycoming county.
162	21	230	12,628	250	13,560	260	14,025	260	14,025	13,559	McIntyre, Lycoming county.
197	42	240	15,276	260	16,374	270	16,906	270	16,906	16,365	McIntyre, Lycoming county.
. . .	37	400	14,800	380	14,060	409	15,133	. . .	. . . .	. . . .	Clermont, McKean county.
. . .	35	605	21,175	497	17,395	498	17,430	490	17,150	18,287	Antrim, Tioga county.
200	27	363	9,801	283	7,641	293	7,911	295	9,963	8,329	Antrim, Tioga county.
185	28	600	16,800	580	16,240	575	16,100	595	16,660	16,450	Fall Brook, Tioga county.
286	58	540	32,400	550	33,000	520	31,200	555	33,300	32,475	Fall Brook, Tioga county.
270	72	250	18,000	322	23,084	268	19,296	223	17,560	19,359	Arnot, Tioga county.
357	40	435	19,320	445	17,800	537	21,480	554	22,160	20,190	Arnot, Tioga county.
442	70	465	32,550	402	28,140	510	28,700	286	20,020	27,327	Arnot, Tioga county.
90	72	540	38,880	510	36,720	520	37,440	500	33,000	36,000	Morris Run, Tioga county.
80	66	500	33,000	533	34,980	500	33,000	520	34,320	32,000	Morris Run, Tioga county.
125	52	560	29,120	570	29,640	540	28,080	570	29,640	26,450	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal with the remarks upon the condition of the several collieries*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
J. Mulloney,				June 4, 1878,	June 4, 1878,
John Rehrer,	26	Married,		June 8,	
John Maxwell,	22	Single,		June 11,	
Gust. Larson.	28	Single,		June 17,	
Daniel Thomas,	45	Married,		June 24,	
Samuel Price,	20	Single,		June 27,	

An investigation, by inquest, on the body of J. Mulloney, killed at Ocean colliery' Clearfield county, June 4, resulted in a verdict: Death caused by accident. No blame being attached to any person.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of June, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed,	By a fall of coal, breaking back of the spay, Ocean colliery, Clearfield county.
Right foot crushed,	By fall of coal, Webster colliery, Clearfield county.
Shoulder hurt,	By fall of coal, Arnot colliery, Tioga county.
Back hurt,	By fall of rock, while driving pillar, McIntyre colliery, Lycoming county.
Collar bone broken,	By fall of coal, Rolling-mill mine, Cambria county.
Toes crushed,	Run over by a mine car, Robertsdale, Huntingdon county.

A **STATEMENT** *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	.	1	. .	. .	1	. .	. .
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	7	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Mount Hope,	. . . .	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Snow Shoe Mine,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	. .	1	. .	. .	. .	3	. .
Powelton,	Robert Hare, Powell & Co.,	Semi-bitum.	. .	1	. .	. .	. .	. .	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	11	2
Sterling, No. 2,	Robert Hare, Powell & Co.,	Semi-bitum.	. .	1	. .	. .	. .	5	. .
Penn,	Reakirt Bros. & Co.,	Bituminous,	. .	1	.	. .	1	4	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	2	. .
Excelsior,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	8	.
Webster,	Webster Coal Company, limited,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Company, limited,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Laurel Run,	Nuttall, Bacon & Co.,	Bituminous,	. .	1	. .	. .	1	. .	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	.	1	2	.
Sandy Lick,	Sandy Lick Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	1
Silver Creek,	Daniel Eldridge,	Bituminous,	. .	1	. .	. .	1	4	2
Daguscahonda,	North-Western M. and Ex. Co.,	Bituminous,	. .	1	. .	. .	1	5	.
Cascade,	Kaul & Hall,	Bituminous,	. .	1	. .	. .	1	2	. .
St. Mary's,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	2	. .
Tannerdale,	St. Mary's Coal Company,	Bituminous,	. .	1	. .	. .	. .	1	. .
Fisher,	Fisher & Miller,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Robertsdale,	Rockhill Iron and Coal Co.,	Semi-bitum.	. .	1	. .	. .	1	4	1
Clermont,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	5	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	9	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	7	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	21	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	.
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	.	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of July, 1878.

Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Ventilation.							
												1st week.		2d week.		3d week.	
										Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	202	56	73	331	51	11	12,401	2							
. .	. .	. .	. . .	.	. . .	. . .	. . .	. .	. . . .	2							
. .	. .	. .	135	38	30	203	17	5	14,000	2							
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . .	2							
3	106	5	100	16	40	156	19	. .	7,500	4	140	158	22,100	164	22,900	151	21,200
. .	. .	. .	180	53	57	290	28	. .	11,000	3	90	85	7,650	90	8,100	98	8,820
2	50	2	68	20	33	121	18	1	3,600	2	88	150	13,200	123	10,224	120	10,560
. .	. .	. .	14	1	1	16	1	1	850	2	36	50	1,800	50	1,800	50	1,800
. .	. .	. .	48	. . .	3	55	5	. .	3,500	2	36	200	10,425	190	9,963	210	10,904
. .	. .	. .	38	3	10	51	7	4	1,691	7	33	292	9,642	272	9,002	282	9,322
. .	. .	. .	14	2	1	17	1	. .	1,200	3	33	75	2,375	80	2,640	100	3,300
1	15	1	132	30	14	176	16	2	10,000	3	42	350	14,700	300	13,100	365	15,530
. .	. .	. .	86	6	9	101	7	. .	11,000	4	55	150	8,250	150	8,250	150	8,250
. .	. .	. .	22	4	3	29	2	2	1,400	2	48	90	4,320	90	4,320	90	4,320
. .	. .	. .	101	32	34	176	21	.	9,827	. . .	58	180	12,768	185	13,051	290	12,291
. .	. .	. .	46	9	14	69	5	1	3,827	2	72	320	14,238	340	15,078	250	15,258
. .	. .	. .	30	4	8	42	3	. .	3,283	2	56	160	10,931	175	11,746	165	11,212
. .	. .	. .	350	30	40	420	21	8	27,500	2	33	626	20,658	628	20,658	626	20,658
. .	. .	. .	160	8	8	176	6	5	12,000	2	48	470	22,560	460	25,080	465	22,320
. .	. .	. .	96	29	20	145	8	2	7,908	2	42	270	12,420	250	11,960	290	13,340
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	.	. . .	. .	42	250	11,250	240	10,800	270	12,150
. .	. .	. .	27	8	6	41	4	2	1,975	4	34	110	4,896	100	4,596	100	4,006
. .	. .	. .	27	8	2	37	3	. .	3,967	2	36	120	5,514	120	5,511	75	3,924
. .	. .	2	40	8	. . .	48	4	2	3,261	2	42	250	10,500	200	8,400	230	9,660
. .		. .	67	14	14	95	. . .	5	2,596	4	30	160	4,800	180	5,400	150	4,500
1	30	2	85	10	8	103	4	. .	5,200	2	30	280	8,400	270	8,100	280	8,400
1	. .	. .	25	8	7	40	. . .	.	1,672	2	42	120	5,040	120	5,049	120	5,040
. .	. .	. .	60	20	8	88	2	4	5,918	2	42	180	8,988	185	9,198	190	9,408
. .	. .	. .	17	3	3	23	1	2	1,200	2	42	168	8,926	170	8,610	163	8,316
. .	. .	. .	22	4	3	29	1	1	1,132	2	42	160	. . . .	150	. . . .	150	
. .	. .	1	155	9	30	204	19	5	8,000	4	35	110	3,850	109	3,820	110	3,850
. .	. .	. .	115	25	10	150	8	. .	4,203	2							
1	7	1	47	4	15	66	7	1	12,904	2	30	220	7,702	220	7,602	220	7,602
. .	. .	. .	91	15	31	137	14	2	. . . .	3	48	200	11,232	200	11,232	200	11,232
. .	. .	. .	100	20	18	138	7	. .	. .	4	78	170	15,982	160	15,225	170	15,982
. .	. .	. .	184	22	122	326	21	. .	14,354	2	33	200	6,600	210	6,930	220	7,260
. .	. .	. .	29	10	9	48	7	. .	2,182	3	30	520	15,600	510	15,300	485	14,550
. .	. .	. .	45	25	18	88	9	. .	3,907	4	47	520	27,170	510	26,480	500	26,125
. .	. .	. .	240	114	60	414	51	1	. . . .	2	42	1,038	43,596	930	39,060	1,199	50,358
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	40	143	5,720	143	5,720		
. .	. .	. .	. . .	. .	. . .	. . .	. . .	. .	.	2	65	358	23,270	447	29,055	375	24,075
2	40	2	77	50	25	152	16	. .	5,912	3	90	250	22,500	260	23,400	240	21,600
. .			29	21	26	76	15	2	7,116	3	130	250	32,500	240	31,200	260	33,800
1	20	1	83	59	30	172	19	. .	9,954	2	90	260	23,400	250	22,500	260	23,400

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average velocity of air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	. .	. . .	. . .	100	4,800	125	6,000	110	5,280	90	4,320
Barclay,	. .	. . . .	. . .	. . . .	. . . .	. .	. . . .	. . . .	. . . .	. . . .	. . . .
Carbon Run,	. .	. . . .	. . .	70	210	80	240	70	210	70	200
Carbon Run,	. . .	. . . .	. . .	220	2,640	190	2,280	150	1,800	200	2,520
Bennington Shaft,	152	21,600	75	75	3,150	79	3,3 8	73	3,108	73	3,108
Rolling-Mill Mine,	95	8,550	94	70	3,150	75	3,375	80	3,600	85	3,825
Blast Furnace Mine,	150	13,200	136	50	4,800	54	5,184	54	5,184	54	5,184
Conemaugh Mine,	50	1,800	50	35	1,365	35	1,365	35	1,365	35	1,365
Mount Hope,	195	10,164	199	155	3,875	150	3,750	165	4,125	155	3,875
Show Shoe Mine,	311	10,282	562	282	8,478	263	7,893	278	8,194	301	9,057
Powelton,	80	2,640	86	60	2,400	75	3,000	65	2,600	60	2,400
Franklin,	350	14,700	341	225	7,875	200	7,800	250	8,750	230	8,050
Sterling, No. 2,	150	8,250	150	130	3,900	200	3,600	100	3,000	130	3,900
Penn,	90	4,320	90	55	1,925	55	1,925	55	1,925	55	1,925
Eureka,	190	13,340	185	210	5,480	220	6,081	200	5,616	210	5,848
Mapleton,	310	13,968	329	130	5,312	150	5,920	130	5,312	120	4,992
Goss Run,	150	10,328	155	210	10,357	230	11,576	220	11,149	210	10,357
Ocean,	626	20,658	626	. .	. .	. . . .	. . . .	. .	. . . .	. . .	. . .
Excelsior,	460	22,080	463	350	12.600	340	12,240	355	12,780	350	12,600
Webster,	300	13,800	2,880	170	6,800	190	7,600	200	8,000	180	7,200
Webster,	240	10,800	250	210	8,820	200	8,400	220	9,240	210	8,820
Laurel Run,	70	3,536	95	70	2,912	60	2,632	75	3,052	60	2,632
Decatur,	80	4,104	98	120	4,928	100	4,228	75	3,488	75	3,488
Sandy Lick,	200	8,400	230	250	10,500	200	8,400	230	9,660	200	8,400
Silver Creek,	200	6,000	173	83	2,240	75	2,025	100	2,700	77	2,079
Daguscahonda,	280	8,400	280	265	7,800	260	7,800	265	7,800	260	7,800
Cascade,	120	5,040	120	110	4,620	110	4,620	110	4,620	110	4,620
St. Mary's,	185	9,198	185	190	9,408	195	9,618	200	9,828	195	8,998
Tannerdale,	169	8,568	167	159	7,640	192	7,910	195	8,015	194	7,980
Fisher,	155	. . .	153	14	. . . .	145	. . . .	135	. . . .	140	. . . .
Robertsdale,	110	3,850	110	. .	. . . .	. . . .	. .	. . . .	. . . .	. . . .	. .
Clermont,	. . .	.	. . .	. . . .	. . . .	430	8,600	388	7,760	480	9,000
McIntyre,	220	7,602	220	150	5,565	150	5,565	150	5,565	150	5,565
McIntyre,	200	11,232	200	160	5.856	160	5,856	160	5,856	160	5,856
McIntyre,	170	15,982	167	380	14,355	380	14,355	380	14,355	380	14,355
Antrim,	215	7,095	211	190	5,320	200	5,600	210	5,880	195	5,340
Fall Brook,	530	15,900	411	180	3,600	200	4,000	195	2,900	210	4,200
Fall Brook,	450	23,512	495	300	8,400	315	8,540	280	7,980	275	7,840
Arnot,	769	35,278	984	322	9,982	322	9,982	286	8,866	286	8,866
Arnot,	366	14,640	163	250	7,500	358	10,740	268	8,040	358	10,740
Arnot,	430	27,950	437	537	12,880	483	11,592	447	10,728	465	11,160
Morris Run,	250	22,500	250	80	4,000	80	4,000	100	5,000	90	4,500
Morris Run,	250	32,500	250	90	3,600	80	3,200	100	4,000	90	3,600
Morris Run,	250	22,400	255	130	5,200	120	4,800	130	5,200	110	4,400

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	REMARKS.
40	41	42	43	44	45	46	47	48	49	50	51
106	72	450	16,200	610	21,960	520	18,720	480	17,280	18,540	Barclay, Bradford county.
. . .	71	370	19,220	310	16,200	450	20,650	330	15,715	17,940	Barclay, Bradford county.
70	120	415	50,215	425	51,425	400	48,400	350	42,350	48,198	Carbon Run, Bradford co.
192	315	279	8,788	290	9,135	240	7,560	260	8,190	8,418	Carbon Run, Bradford co.
75	352	48	16,896	50	17,500	48	16,896	47	16,544	16,957	Bennington, Blair county.
75	38	325	12,280	325	1,225	350	13,200	350	13,200	12,725	Johnstown, Cambria county.
53	61	340	20,740	345	21,045	345	21,400	350	21,350	21,045	Johnstown, Cambria county.
35	31	85	2,635	85	2,635	85	2,635	85	2,635	2,635	Johnstown, Cambria county.
156	36	225	9,450	240	10,080	235	9,870	220	9,180	9,895	Mount Hope, Cameron co.
290	34	311	10,594	301	10,264	331	11,254	301	10,261	20,593	Snow Shoe, Centre county.
70	30	80	2,400	95	2,850	110	3,300	110	3,300	2,975	Powelton, Centre county.
226	60	725	45,675	700	44,100	800	50,400	750	47,025	46,855	Franklin, Clearfield county.
120	40	200	8,000	200	8,000	200	8,000	210	8,400	8,100	New Sterling, Clearfield co.
55	15	630	9,450	630	9,445	630	9,450	630	9,450	9,440	Houtzdale, Clearfield county.
210	25	300	8,608	320	9,110	295	8,479	310	8,858	8,390	Houtzdale, Clearfield county.
130	48	220	12,144	240	13,056	210	11,664	230	12,624	12,372	Mapleton, Clearfield county.
220	33	290	11,600	315	12,439	310	12,265	325	12,789	12,000	Goss Run, Clearfield county.
. . .	61	390	23,790	390	23,790	. . .	. .	. . .	. . . .	23,790	Goss Run, Clearfield county.
348	36	595	20,420	590	21,240	595	20,420	600	21,600	21,000	Goss Run, Clearfield county.
185	25	680	18,360	660	17,820	700	18,900	710	19,170	18,562	Goss Run, Clearfield county.
215	30	550	16,500	530	15,900	560	16,800	580	17,400	16,650	Goss Run, Clearfield county.
66	36	100	4,824	90	4,464	90	4,464	60	3,381	4,284	Laurel Run, Clearfield co.
92	36	120	5,544	120	5,544	75	3,290	80	4,104	4,479	Decatur, Clearfield county.
215	42	250	10,500	200	8,400	230	9,660	200	8,400	9,590	Du Bois, Clearfield county.
84	12	170	2,040	195	2,340	160	1,820	170	2,040	2,000	St. Mary's, Elk county.
262	30	300	9,000	290	8,700	300	9,000	300	9,000	8,600	Daguscahonda, Elk county.
110	24	205	4,920	250	4,920	205	4,920	205	4,920	4,920	St. Mary's, Elk county.
195	24	290	7,704	293	7,776	295	7,824	293	7,776	7,777	St. Mary's, Elk county.
194	24	293	7,776	294	7,800	281	7,488	293	7,776	7,777	St. Mary's, Elk county.
140	36	140	. . . .	150	. . . .	140	. .	145	. . . .	. . . .	Broad Top, Huntingdon co.
. . .	. . .	. . .	. . . .	. . .	. . .	. . .	. . .	. . .	. . . .	. . . .	Robertsdale, Huntingdon co.
400	37	. . .	. . .	300	11,340	272	10,280	350	13,230	12,300	Clermont, McKean county.
150	20	200	9,828	200	9,828	200	9,828	200	9,828	9,828	McIntyre, Lycoming county.
160	23	260	14,025	260	14,025	260	14,025	260	14,025	14,025	McIntyre, Lycoming county.
380	42	270	16,906	270	16,906	270	16,906	270	16,906	16,906	McIntyre, Lycoming county.
198	35	490	17,105	420	14,700	450	15,750	464	16,240	15,698	Antrim, Tioga county.
196	30	320	9,600	325	9,750	310	9,300	320	9,600	9,561	Fall Brook, Tioga county.
289	60	570	34,200	585	35,100	560	33,600	575	34,500	31,360	Fall Brook, Tioga county.
306	72	384	27,648	322	23,184	322	23,184	295	21,240	23,121	Arnot, Tioga county.
309	40	350	14,320	510	20,750	429	17,160	537	21,148	18,314	Arnot, Tioga county.
483	70	400	28,000	340	23,800	358	25,060	377	26,390	25,812	Arnot, Tioga county.
88	72	510	36,720	520	37,440	500	33,000	510	36,720	31,220	Morris Run, Tioga county.
90	66	500	33,000	500	33,000	520	34,980	510	36,660	33,120	Morris Run, Tioga county.
122	52	570	29,640	560	29,120	570	29,640	570	29.640	29,050	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Matthias Weesel, . . .	50	Married, . .	4	July 2, . . .	July 3, . . .
George Smith, ...	52	Married, . .	. . . .	July 22, . . .	. . . .
James Mooney, ...	65	Married, . .	. . . .	July 26, . . .	. . . .
Thomas Lobb, ...	52	Married, . .	6	July 27, . . .	July 27, . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, Collieries, &c., in said district, for the month of July, 1878:

NATURE OF ACCIDENT.	REMARKS.
Killed,	At Rolling Mill mine, Johnstown, Cambria county; by fall of coal. Investigation resulting in attaching no blame to any person; an accident that could not be foreseen.
Collar-bone broken,	At Sterling, No. 2, mine, Sterling, Clearfield county; by fall of coal.
Head and body bruised,	At Morris Run mine, Morris Run, Tioga county; by fall of coal while undermining.
Killed,	At Ocean colliery, Goss Run, Clearfield county; by fall of top coal. An inquest was held on the body, and a verdict given that death was caused by a fall of top coal; it being an unavoidable accident.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	7	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	1	. .
Lloyd's,	Bell's Gap Railroad Company.	Bituminous,	. .	1	. .	1	. .	5	. .
Sonman,	Dysart & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Snow Shoe,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	. .	1	. .	. .	. .	3	. .
Daguscahonda,	N. Western Mining and Ex. Co.,	Bituminous,	. .	1	. .	. .	1	7	. .
Cascade,	Kaull & Hall,	Bituminous,	. .	1	. .	. .	1	2	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.	.	1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	8	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	3
Laurel Run,	Nuttall, Bacon & Co.,	Bituminous,	.	1	. .	. .	1	5	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	. .
Excelsior,	Fisher Bro. & Miller.	Bituminous,	. .	1	. .	. .	1	8	. .
Penn,	Reakirt Bro. & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Sandy Lick,	Sandy Lick Gas Coal Company,	Bituminous,	. .	1	. .	. .	1	3	2
Rochester,	Bell, Lewis & Yates,	Bituminous,	. .	1	. .	. .	1	8	. .
Moredale,	Reakirt & Bros,,	Bituminous,	. .	1	. .	. .	1	. .	. .
Robertsdale,	Rockhill Iron and Coal Company,	Bituminous,	. .	1	. .	. .	1	.	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum,	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	.
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	.	. .	1	8	. .
Clermont,	Buffalo Coal Company,	Bituminous,		1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	5	1
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	21	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	.	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of August, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK		3D WEEK.	
Number of engines.	Horse power.	Boilers how many.	Number of miners—men.	Number of miners—boys	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	202	56	76	331	51	11	11,835	2							
. . .	.	. . .	. . .	. . .	. . .	. .	. . .		. . . .	2							
. .	.	. .	137	38	30	205	17	5	14,000	2							
3	108	5	100	16	36	152	17	. .	6,000	4	352	58	20,500	58	20,500	55	19,600
. .	. .	. .	172	41	57	270	28	. .	11,170	3	90	95	8,550	90	8,100	95	8,550
2	50	2	68	18	34	120	18	1	4,500	2	88	160	14,080	165	14,520	150	13,200
. .	. .	. .	15	1	1	17	1		750	2	36	70	2,520	75	2,270	93	3,348
1	. .	2	65	5	8	78	11	. .	6,800	2	34	140	15,000	460	15,700	450	13,300
.	. .	. .	65	8	12	85	6	2	4,648	2	51	190	9,820	185	9,830	197	9,723
.	. .	. .	35	3	10	48	7	4	1,800	7	33	292	9,642	272	9,002	282	9,322
1	30	2	100	20	6	126	4	.	7,227	2	30	300	9,000	325	9,750	310	9,300
1	. .	1	28	5	5	38	.	. .	1,7 3	2	42	120	5,280	120	5,280	120	5,280
. .	. .	. .	111	20	31	162	16		6,373	2	58	185	13,051	180	12 768	190	13,345
.	. .	. .	42	7	9	58	4	. .	3,662	2	56	175	11,746	160	10,931	165	11,202
. .	. .	. .	41	12	14	67	5	1	2,204	4	72	340	16,078	330	15,756	390	16 896
. .	. .	. .	225	15	18	258	14	4	32,224	2	33	500	16,500	480	15,840	510	16,830
. .	.	. .	175	10	10	195	1	5	. . . .	3	33						
1	. .	1	139	37	29	205	14	.	7,811	3	42	300	12,600	315	13,239	325	13,650
. .	. .	. .	27	8	6	41	4	2	1,590	2	34	115	5,066	130	5,576	110	4,896
. .	. .	. .	27	8	2	37	3	. .	2,493	2	36	100	3,824	90	4,460	80	4,104
. .	. .	. .	40	4	4	48	5	1	1,916	2	57	100	10,530	. . .	.	90	10,505
. .	. .	. .	160	8	8	176	6	5	11,000	2	60	247	14,620	250	15,000	255	15,300
. .	. .	. .	30	5	3	38	3	2	2,047	2	48	80	4,330	80	4,330	120	5,470
. .	. .	2	50	. .	8	58	4	2	5,000	2	42	250	10,500	300	12,600	250	10,500
. .	. .	. .	82	1	7	91	6	1	5,804	2	56	300	16,800	300	16,800	300	16,800
. .	. .	. .	22	2	3	27	2	3	1,073	2	42	150	6,300	160	6,920	170	7,620
. .	. .	1	141	10	30	181	20	3	7,660	5	35	220	7,700	220	7,700	230	7,700
1	6	1	47	4	15	66	7	1	14,381	2	30	220	7,602	220	7,602	2 0	7,020
. .	. .	. .	91	15	31	137	14	2	. . .	2	48	200	11,232	200	11,232	220	12,163
. .	. .	. .	100	20	18	138	7	. .	. .	2	78	170	15,982	170	15,982	170	15,982
. .	. .	. .	120	. . .	10	130	9	. .	3,582	2	30	300	9,000				
. .	. .	. .	184	22	120	326	21	. .	13,981	5	33						
. .	. .	. .	. . .		. .		. . .	. .	. . . .	. . .	33	252	8,316	240	7,920	250	8,250
. .	. .	. .	16	8	8	32	6	.	1,267	2	36	200	6,000	240	7,200	225	6,750
. .	. .	. .	35	20	10	65	8	. .	4,456	2	60	150	7,838	160	8,360	155	8,109
. .	. .	. .	240	114	60	415	51	1	. . . .	2	42	958	4,236	1,038	43,596	805	33,810
. .	. .	. .	. . .	. . .	. .	. . .	. .		. . . .	. . .	40	196	7,340	161	6,440		
. .	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	. . .	65	429	27,885	429	27,885	429	27,885
2	40	2	53	35	25	113	16	. .	6,975	3	90	260	23,400	250	22,500	260	23,400
. .	. .	. .	61	39	26	126	15	2	8,111	3	103	260	33,800	250	32,500	240	31,200
1	20	1	100	64	30	194	19	. .	10,274	2	90	260	23,400	260	23,400	250	22,500

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
	29	30	31	32	33	34	35	36	37	38	39
Barclay,	...	...	...	...	...	...	...	...	...	...	...
Barclay,	...	...	...	100	4,800	130	6,240	120	5,760	90	4,820
Carbon Run,	...	...	...	70	210	79	237	79	237	79	237
Carbon Run,	...	...	...	179	2,148	129	1,548	139	1,668	139	1,968
Bennington Shaft,	54	19,000	56	75	3,150	78	3,300	73	3,100	71	3,000
Rolling-Mill Mine,	98	8,820	94	85	3,825	80	3,600	84	3,780	99	4,455
Blast Furnace Mine,	150	13,200	156	55	5,280	60	5,760	63	6,048	60	5,760
Conemaugh Mine,	90	3,240	...	42	1,386	45	1,485	48	1,584	48	1,584
Lloyd's,	470	16,000	455	490	12,950	470	14,530	490	13,900	490	15,170
Sonman,	197	10,350	194	...	...	...	...	...	...	...	...
Snow Shoe,	311	10,280	300	282	8,475	263	7,893	278	8,184	301	9,057
Daguscahonda,	370	11,100	325	305	9,150	325	9,860	315	9,450	375	11,250
Cascade,	120	5,280	120	90	2,880	90	2,880	90	2,880	90	2,880
Eureka,	185	13,051	187	2.0	5,848	220	6,081	200	5,616	220	6,081
Goss Run,	150	10,388	165	210	10,357	220	11,149	210	10,357	190	9,532
Mapleton,	370	16,056	364	70	3,324	76	3,544	106	4,281	203	6,386
Ocean,	490	16,170	495	250	10,500	230	9,660	225	9,450	240	10,080
Ocean,	...	...	...	185	7,770	190	7,980	185	7,770	195	8,190
Franklin,	330	13,866	317	300	10,500	315	11,025	325	11,375	300	10,500
Laurel Run,	90	4,216	111	100	3,752	120	4,312	70	2,212	60	2,632
Decatur,	75	3,924	86	90	3,968	80	3,608	66	3,200	56	2,880
Moshannon,	...	...	95	35	3,500	...	...	30	1,500	...	...
Excelsior,	245	14,700	249	220	9,900	225	10,125	230	10,350	225	10,125
Penn,	150	7,200	108	55	1,925	60	2,100	65	2,275	70	2,245
Sandy Lick,	275	11,550	260	126	5,000	150	6,000	125	5,000	138	5,520
Rochester,	300	16,800	300	290	13,920	290	13,920	290	13,920	290	13,920
Moredale,	170	7,620	165	110	3,640	120	4,001	110	3,640	130	4,820
Robertsdale,	220	7,700	220	150	...	...	...	...	...	...	...
McIntyre,	200	7,020	210	150	5,564	150	5,565	150	5,565	150	5,565
McIntyre,	200	11,232	205	160	5,858	160	5,856	160	5,856	160	5,856
McIntyre,	170	15,980	170	400	14,976	380	14,355	380	14,355	380	14,355
Clermont,	400	12,000	350	406	8,120	...	...	...	...	500	10,000
Antrim,	...	...	...	...	...	...	...	...	...	...	...
Antrim,	235	7,755	244	210	5,880	200	5,600	205	5,740	195	5,460
Fall Brook,	200	6,160	214	150	3,600	160	3,840	150	3,600	140	3,360
Fall Brook,	165	8,631	157	250	6,500	260	6,760	260	6,760	270	7,020
Arnot,	850	35,600	912	250	7,750	286	8,846	286	8,846	270	8,370
Arnot,	153	5,720	127	358	10,740	304	9,120	304	9,120	340	10,200
Arnot,	393	25,245	420	442	10,606	465	11,160	431	10,344	399	9,516
Morris Run,	250	22,500	255	90	4,500	80	4,000	90	4,500	100	5,000
Morris Run,	250	32,500	258	90	3,600	80	3,200	90	3,600	100	4,000
Morris Run.	260	23,400	259	140	5,600	120	4,800	120	4,800	130	5,200

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION
40	41	42	43	44	45	46	47	48	49	50	51
. . .	72	460	15,470	500	18,000	550	19,800	390	14,040	17,100	Barclay, Bradford county.
112	91	290	13,685	670	19,220	370	16,585	300	15,705	16,298	Barclay, Bradford county.
76	91	839	30,819	309	28,119	300	27,300	309	28,119	28,597	Carbon Run, Bradford co.
130	315	279	8,788	309	9,733	339	10,670	329	10,364	9,890	Carbon Run, Bradford co.
74	140	117	16,400	118	16,600	108	15,160	107	15,000	15,760	Bennington, Blair county.
87	38	350	13,300	325	12,350	350	13,300	341	13,300	13,062	Johnstown, Cambria county.
59	61	315	21,045	350	21,350	350	21,350	355	21,350	21,273	Johnstown, Cambria county.
45	31	85	2,635	90	2,790	110	3,410	110	3,410	3,061	Johnstown, Cambria county.
460	33	480	15,810	500	16,500	490	16,170	520	17,100	16,700	Lloyd's, Cambria county.
. . .	28	290	8,950	290	9,450	316	10,630	358	10,128	9,600	Sonman, Cambria county.
300	34	311	10,991	301	10,264	303	10,261	331	11,251	10,593	Snow Shoe, Centre county.
330	30	310	9,300	330	9,900	320	9,600	380	11,400	10,000	Daguscahonda, Elk county.
90	24	260	5,240	260	5,210	260	5,210	260	5,240	5,210	St. Mary's, Elk county.
215	26	310	8,858	295	8,479	300	8,608	280	8,101	8,700	Houtzdale, Clearfield county.
200	36	310	12,265	325	12,789	315	12,439	295	11,741	12,200	Goss Run, Clearfield county.
113	48	180	10,272	200	11,232	190	10,752	350	17,240	12,374	Mapleton, Clearfield county.
236	61	410	25,110	400	21,400	415	25,615	410	25,010	24,932	Goss Run, Clearfield county.
188	45	370	16,650	390	17,550	385	17,325	380	17,100	17,156	Goss Run, Clearfield county.
310	63	750	47,250	760	47,880	775	48,825	750	47,250	47,805	Franklin, Clearfield county.
87	36	110	5,184	100	4,821	100	4,825	85	4,234	4,707	Laurel Run, Clearfield county
73	36	100	4,821	90	4,461	80	4,104	75	3,921	4,329	Decatur, Clearfield county.
33	40	200	15,000	. . .	. . .	210	16,000	. .	. . . .	15,500	Sobieski, Clearfield county.
225	36	600	21,600	625	22,500	600	21,600	630	22,680	22,950	Goss Run, Clearfield county.
62	15	630	9,450	610	9,600	680	10,200	690	10,350	10,160	Houtzdale, Clearfield county.
140	42	250	10,500	300	12,600	250	10,000	275	11,550	11,240	Du Bois City, Clearfield co.
290	48	300	14,400	300	14,400	300	14,400	300	14,400	14,400	Du Bois City, Clearfield co.
. . .	. . .	. . .	. . .	. .	. . . .	. .	. . . .	. .	. . . .	. . . .	Moredale, Huntingdon co.
. . .	. . .	. . .	. . . .	. . .		. .	. . .	. . .	. . . .	. . . .	Robertsdale, Huntingdon co.
150	20	200	9,828	200	9,820	200	9,828	200	9,828	9,828	McIntyre, Lycoming county.
160	25	260	14,025	270	16,302	260	14,025	260	14,025	14,591	McIntyre, Lycoming county.
385	42	270	16,906	270	16,906	270	16,906	260	16,374	16,773	McIntyre, Lycoming county.
452	40	380	15,200	415	16,600	404	16,160	. .	. . . .	15,786	Clermont, McKean county.
. . .	35	480	16,800	464	16,240	475	16,625	460	16,100	16,411	Antrim, Tioga county,
202	27	358	9,666	340	9,180	350	9,450	330	8,910	9,310	Antrim, Tioga county.
150	30	210	6,300	200	6,000	225	6,750	215	6,450	6,375	Fall Brook, Tioga county.
160	60	320	19,200	330	19,800	315	18,900	320	19,200	19,275	Fall Brook, Tioga county.
273	72	251	18,072	262	18,861	175	12,600	200	14,400	15,985	Arnot, Tioga county.
326	40	483	19,320	501	20,040	447	17,880	537	21,480	19,680	Arnot, Tioga county.
434	70	385	26,880	402	28,140	393	27,510	358	25,660	26,897	Arnot, Tioga county.
90	72	520	37,440	510	36,570	540	38,160	510	36,720	37,610	Morris Run, Tioga county.
90	66	530	34,980	510	33,660	500	33,000	510	33,660	33,916	Morris Run, Tioga county.
128	52	570	29,640	570	29,640	560	29,120	570	29,640	29,100	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Thomas Ganey, ...	15	Single, . . .	. . . .	August 8, . .	. . . .
James Blair, ...	14	Single, . . .	. . . .	August 8, . .	. . . .
Samuel McClellan, . .	29	Single, . . .	. . . .	August 9, . .	. . . .
J. H. Butters, ...	43	Married, . .	. . . .	August 11, . .	. . . .
Thomas Williamson, . .	36	Married, . .	. . . .	August 11, . .	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of August, 1878.

NATURE OF ACCIDENT.	REMARKS.
Finger cut off, ...	At Arnot colliery, Tioga county, by falling of mine wagon.
Hand hurt, ...	At Arnot colliery, Tioga county, by falling of mine wagon.
Six ribs broken, collar bone broken, and shoulder blade and head bruised.	At Franklin colliery, Clearfield county, by fall of coal.
Hurt in both legs, ...	At Arnot colliery, Tioga county, by fall of roof and coal.
One leg broken in two places, and head slightly bruised, ...	At Arnot Colliery, Tioga county, by fall of roof.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous, or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	6	2
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	1	. .	1	. .	. .	. .
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	.	. .	. .	1	3	2
Conemaugh,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Lloyd's,	Bell's Gap Railroad Company,	Bituminous,	. .	1	. .	1	. .	8	. .
Mount Hope,	C. Elias & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Snow Shoe,	Bellefonte & Snow Shoe R.R. Co.,	Bituminous,	. .	1	. .	. .	. .	3	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	11	3
Penn,	Reakirt Bros. & Co.,	Bituminous,	. .	1	. .	. .	1	2	. .
Sterling, No. 2,	Robert Hare Powell & Co.,	Semi-bitum.	. .	1	. .	. .	. .	7	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	5	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Excelsior,	Fisher Bros. & Miller,	Bituminous,	. .	1	. .	. .	1	8	. .
Webster,	Webster Coal Co., (limited,)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Co , (limited,)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Laurel Run,	Nuttall, Bacon & Co.,	Bituminous,	. .	1	. .	. .	1	5	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	2	. .
Sandy Lick,	Sandy Lick Gas Coal Company,	Bituminous,	. .	1	. .	. .	1	3	1
Daguscahonda,	N.W. Mining and Ex. Company,	Bituminous,	. .	1	. .	. .	1	7	. .
Cascade,	Kaul & Hall,	Bituminous,	. .	1	. .	. .	1	3	. .
Moredale,	Reakirt Bros. & Co.,	Semi-bitum.	. .	1	. .	. .	. .	. .	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	11	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Clermont,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .		1	5	1
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	.	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	11	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of September, 1878.

Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
										Number of openings.	Inlet size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
. .	. .	. .	137	38	30	205	17	5	12,500	2							
. .	. .	. .	. . .	. .	. . .	. . .	. . .	.	. .	2							
2	. .	2	203	56	74	333	51	5	14,650	2							
3	80	5	72	15	33	120	16	. .	4,500	4	140	97	13,666	88	12,300	103	14,050
. .	. .	. .	.	. . .	. . .	. . .	. . .	. .		. . .	. .	97	13,696	88	12,300	103	14,050
. .	. .	. .	172	38	59	269	29		11,209	3	90	95	8,550	95	8,560	90	8,100
2	50	2	68	19	34	121	18	1	3,541	2	88	136	11,596	130	11.440	130	11,440
. .	. .	.	16	1	1	18	1	1	910	2	36	87	3,122	80	2,880	90	3,210
1	. .	2	85	3	11	99	12	. .	6,929	2	35	460	16,100	370	12,950	350	12,250
. .	. .	. .	48	4	6	58	4		3,000	2	41	200	10.425	190	9,903	210	10,917
. .	. .	. .	33	3	10	46	7	4	1,746	7	33	282	9,322	212	9.020	292	9,641
.	. .	. .	37	6	5	42	3	2	2,712	5	35	225	12,099	200	11,400	180	10,260
1	. .	1	139	48	28	215	14	2	6,957	3	42	375	15,750	400	16,800	410	17,220
. .	. .	. .	22	3	2	27	3	2	1,427	2	40	150	6,000	160	6,400	160	6,400
. .	. .	. .	130	15	17	160	10	. .	13,047	6	40	210	9,600	250	10,000	230	9,200
. .	. .	. .	170	15	20	205	15	5	23,500	3	42	460	1,600	470	1,850	460	1,840
. .	. .	. .	130	10	10	150	5	5	. .	2							
. .	. .	. .	175	8	8	191	6	5	10,000	2	48	470	22,560	460	22,080	465	22,320
. .	. .	. .	122	35	30	188	9	2	7,913	2	46	290	13,340	280	12,880	300	13,800
. .	. .	.	. . .	. . .	. . .	. . .	. . .	. .	. . .	. . .	45	270	12,150	260	11.700	280	12,600
. .	. .	. .	10	. . .	5	15	1	.	. .	4	42						
. .	. .	. .	82	19	35	136	15	6	5,570	2	42	50	3,293	40	3,002	60	3,704
. .	. .	. .	.	. .	. . .	. . .	. . .	. .	. . .	. . .	49	70	5,084	60	4,704	70	5,184
. .	. .	. .	27	8	6	41	4	2	1,394	3	34	100	4,556	100	4,556	90	4,216
. .	. .	. .	27	8	2	37	3	.	2,600	2	36	110	5,184	100	4,821	95	4,644
. .	. .	2	45	4	8	57	4	2	3,000	2	42	250	10,500	250	10,500	225	9,450
1	30	2	100	20	10	130	3	2	6,385	2	30	350	10,500	310	10,200	370	11,100
1	8	1	25	8	7	40	. . .	.	853	2	42	150	6,300	150	6,300	150	6,300
. .	. .	. .	28	2	5	35	2	. .	1,533	2	42	130	5,240	150	6,000	150	6,000
.	1	.	46	4	15	65	7	1	13,293	2	30	220	7,602	220	7,602	220	7,602
1	6	1	87	15	31	133	14	3	. . . .	3	48	200	11,232	200	11,232	200	11,232
. .	. .	. .	108	20	19	147	7	. .	. . .	4	78	170	15,982	170	15,982	170	15,982
. .	. .	. .	90	8	8	106	7	. .	5,712	2	60	320	19,320	300	18,300	320	19,520
. .	. .	.	19	8	9	36	7	.	. . . .	4	30	175	5,250	185	5,550	160	4,800
. .	. .	. .	35	20	16	71	8	. .	. .	3	35	175	6,125	190	6,650	210	7,350
. .	. .	. .	184	18	120	327	21	. .	14,510	2							
. .	. .	. .	. . .	. . .	. . .	. .	. .	. .	. . . .	. .	33	250	8,250	240	7,920	250	8,250
. .	. .	. .	246	113	63	422	51	1	. . . .	. . .	42	930	39,060	928	38,976	920	38,640
.	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	. . .	40	304	12,160	286	11,440	286	11,440
	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	. . .	65	409	26,715	401	26,065	411	26.715
2	40	2	53	35	25	113	16	. .	4,074	2	90	280	25,200	300	27,000	280	25,200
. .	. .	. .	61	39	26	126	15	2	4,123	2	130	280	36,400	300	39,000	300	39,000
1	20	1	100	64	30	194	19	. .	6,473	2	90	260	23,400	280	25,200	280	25,200

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Carbon Run,	. . .	. . . .	. . .	69	207	69	207	79	207	79	237
Carbon Run,	. . .	. . . .	. . .	139	1,668	169	2,028	159	1,908	159	1,908
Barclay,	. . .	. . . .	. . .	140	6,720	130	6,240	130	6,240	100	4,800
Barclay,	. . .	. . . .	. . .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . .
Bennington Shaft,	94	13,210	90	122	5,125	97	4,100	119	5,000	124	5,220
Bennington Shaft,	94	13,210	90	122	5,125	97	4,100	119	5,000	124	5,220
Rolling-Mill Mine,	90	8,100	93	84	3,780	85	3,825	80	3,600	84	3,780
Blast Furnace Mine,	168	14,784	141	64	6,144	60	5,760	60	5,760	84	8,064
Conemaugh,	99	3,514	89	45	1,485	46	1,518	48	1,584	54	1,782
Lloyd's,	340	11,900	233	320	9,280	260	7,540	240	6,960	220	6,380
Mount Hope,	195	10,164	199	155	3,875	150	3,750	165	4,125	155	3,875
Snow Shoe,	310	10,282	300	282	8,475	263	8,682	272	8,244	310	9,050
Moshannon,	250	14,250	214	175	7,170	180	7,920	200	8,800	150	6,600
Franklin,	390	16,380	393	400	14,000	425	14,875	455	15,750	435	15,250
Penn,	180	7,200	165	65	2,000	68	2,080	70	2,150	80	2,480
Sterling, No. 2,	270	10,800	260	150	6,000	170	6,800	130	5,200	170	6,800
Ocean,	400	1,880	460	260	940	250	800	280	1,120	270	1,080
Ocean,	. . .	. . . .	. .	. . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Excelsior,	460	22,080	463	350	12,600	340	12,240	365	12,780	350	12,600
Webster,	250	11,500	280	190	7,600	180	7,200	200	8,000	170	6,800
Webster,	250	11,250	265	220	9,240	210	8,820	210	8,820	230	9,660
Mapleton,	180	8,988	140	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	410	12,734
Morrisdale,	40	3,002	48	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Morrisdale,	40	3,744	60	. . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Laurel Run,	90	4.216	95	60	2,632	70	2,912	60	2,632	90	3,472
Decatur,	120	5,544	106	80	3,648	70	3,328	70	3,228	90	3,968
Sandy Lick,	250	10,500	230	. . . .	. .	. . . .	. . . .	. . . .	. . . .	. . . .	. . . .
Daguscahonda,	370	11,100	360	360	10,800	350	10,500	380	11,400	380	11,400
Cascade,	150	6,300	150	110	4,620	110	4,620	110	4,620	110	4,620
Moredale,	168	6,440	147	90	2,700	90	2,700	110	3,300	100	3,000
McIntyre,	220	7,602	220	150	5,565	150	5,565	150	5,560	150	5,565
McIntyre,	200	11,232	200	160	5,856	160	5,856	160	5,856	160	5,856
McIntyre,	170	15,982	170	380	14,355	380	14,385	400	14,976	400	14,976
Clermont,	290	17,690	280	396	10,880	360	10,800	375	10,250	340	10,200
Fall Brook,	190	5,700	177	90	2,160	95	3,228	120	2,880	110	2,640
Fall Brook,	200	7,000	193	120	3,120	135	3,510	130	3,480	135	3,510
Antrim,	. . .	. . . .	. . .	. . .	. . . .	. . . .	. .	. . . .	. . . .	. . . .	. . . .
Antrim,	252	8,316	248	210	5,880	205	5,740	205	5,740	205	5,740
Arnot,	900	38,000	919	300	7,200	304	7,296	320	7,680	340	8,160
Arnot,	5 9	20,760	348	340	10,200	320	9,600	250	7,500	232	6,960
Arnot,	429	27,885	413	591	13,184	662	15,888	680	16,320	698	16,762
Morris Run,	270	24,300	283	100	5,000	110	5,500	100	5,000	100	5,000
Morris Run,	280	36,400	290	110	4,400	120	4,800	120	4,800	100	4,000
Morris Run,	260	2,340	270	120	4,800	130	5,200	140	5,600	120	4,800

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per mile at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of current air per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
...	91	389	35,399	209	19,019	229	20,839	199	18,109	23,329	Carbon Run, Bradford county
...	30	289	8,670	339	10,170	309	9,270	319	9,570	9,429	Carbon Run, Bradford county
125	40	400	25,600	540	34,560	460	29,410	500	32,000	30,375	Barclay, Bradford county.
...	60	280	13,030	370	17,155	389	16,925	290	13,685	15,198	Barclay, Bradford county.
100	352	34	12,120	37	13,200	34	12,000	35	12,320	12,410	Bennington, Blair county.
100	352	34	12,120	37	13,200	34	12,000	35	12,320	12,410	Bennington, Blair county.
83	38	350	13,300	350	13,300	350	13,300	350	13,300	13,300	Johnstown, Cambria county.
67	61	350	21,350	345	21,045	350	21,350	360	21,960	21,426	Johnstown, Cambria county.
48	31	100	3,100	110	3,410	112	3,472	157	4,867	3,712	Johnstown, Cambria county.
260	...	480	15,840	400	13,200	380	12,540	370	12,210	13,450	Lloyd's, Cambria county.
156	41	225	9,450	240	10,080	235	9,870	220	9,180	9,895	Mt. Hope, Cameron county.
280	34	301	10,294	331	11,054	301	10,264	301	10,264	10,544	Snow Shoe, Centre county.
176	44	250	11,125	250	11,125	200	8,900	300	13,350	12,610	Sobieski, Clearfield county.
427	63	700	41,100	740	46,620	755	47,565	750	47,256	46,385	Houtzdale, Clearfield county.
72	15	700	10,000	700	10,000	600	9,700	600	9,000	9,600	Houtzdale, Clearfield county.
140	76	200	10,400	330	12.560	300	11,320	340	12,920	11,810	Sterling, Clearfield county.
265	61	290	17,690	300	18,000	300	18,000	310	18,900	18,150	Goss Run, Clearfield county.
...	45	340	15,300	350	15,750	340	15,300	360	16,200	15,637	Goss Run, Clearfield county.
348	36	595	20,420	590	21,210	595	20,420	600	21,600	2,920	Goss Run, Clearfield county.
185	27	700	18,900	670	18,090	700	18,900	680	18,360	18,562	Goss Run, Clearfield county.
217	30	570	11,100	550	16,500	560	16,800	550	16,500	16,725	Goss Run, Clearfield county.
410	48	...	...	...	...	...	...	250	13,536	13,536	Mapleton, Clearfield county.
...	...	70	4,370	60	3,920	80	4,760	60	3,920	4,320	Morrisdale, Clearfield county.
...	...	70	1,904	90	2,064	100	2,192	70	1,904	2,016	Morrisdale, Clearfield county.
70	36	80	4,104	85	4,289	80	4,104	80	4,104	4,149	Laurel Run, Clearfield county
77	20	90	2,480	80	2,280	95	2,580	110	2,880	2,555	Decatur, Clearfield county.
...	42	250	10,500	250	10,500	225	9,450	250	10,500	10,000	Du Bois, Clearfield county.
370	30	370	11,100	360	10,800	400	12,000	400	12,000	11,550	Daguscahonda, Elk county.
110	24	260	6,240	260	6,240	260	6,240	260	6,240	6,240	St. Mary's, Elk county.
97	...	...	...	...	...	...	...	...	...	.	Moredale, Huntingdon co.
150	20	200	9,828	200	9,828	200	9,728	200	9,828	9,828	McIntyre, Lycoming county.
160	25	260	14,025	260	14,025	260	14,025	260	14,025	14,025	McIntyre, Lycoming county.
390	42	270	16,906	270	16,906	270	16,906	270	16,906	16,906	McIntyre, Lycoming county.
370	40	400	16,000	378	15,120	390	15,600	360	14,400	15,800	Clermont, McKean county.
103	30	200	6,000	225	6,750	230	6,900	230	6,900	6,637	Fall Brook, Tioga county.
130	60	340	20,400	350	21,000	320	19,200	330	19,800	20,100	Fall Brook, Tioga county.
...	27	490	17,150	500	17,560	501	17,920	510	17,850	17,800	Antrim, Tioga county.
206	35	358	9,666	320	8,610	340	9,180	352	9,504	9,300	Antrim, Tioga county.
316	72	205	14,750	286	20,592	280	20,160	260	18,720	18,568	Arnot, Tioga county.
285	40	572	22,880	493	19,720	510	20,000	501	20.040	20,670	Arnot, Tioga county.
582	70	393	27,510	393	27,510	384	26,880	411	28,770	27,667	Arnot, Tioga county.
103	72	570	41,040	600	43,200	600	43,200	560	40,320	42,160	Morris Run, Tioga county.
113	66	570	37,620	610	40,260	610	40,260	570	37,620	38,620	Morris Run, Tioga county.
128	52	570	29,640	600	31,200	600	31,200	570	29,640	30,640	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Thomas Callaghan, . .	38	Married, . .	3	September 2,	September 12,
Andrew Stinely, . . .	18	Single, . .	. . . .	September 2,	. . . .
Michael Cooney, . . .	37	Single, . .	. . . .	September 2,	. . . .
Henry Sparling, . . .	28	Married, . .	. . . .	September 6,	. . . .
John Latcher, ...	. .	. . . . . .	. . . .	. . . .	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of September, 1878.

NATURE OF ACCIDENT.	REMARKS.
Killed,	At Bennington Shaft mine, Blair county, by a premature blast in bottom rock.
Burnt on face and legs,	At Bennington Shaft mine, Blair county, by a premature blast in bottom rock. Not dangerously hurt.
Slightly cut on face,	At Bennington Shaft mine, Blair county, by a premature blast in bottom rock.
Hips and back hurt,	At Arnot mine, Arnot, Tioga county, by falling off mine car. Not dangerously hurt.
Collar bone broken,	At Lloyd's colliery, Cambria county, by fall of slate while undermining.

Inquest was held on the body of Thomas Callaghan, killed at Bennington Shaft mine, Blair county, by John W. Harris, coroner, and a verdict given that the said Thomas Callaghan's death was caused by a premature blast of powder in rock, and that it was purely accidental.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	2
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	7	2
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	1	. .	6	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine.	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Sonman,	Dysart & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Ben's Creek,	S. H. Smith,	Semi-bitum.	. .	1	. .	. .	. .	4	. .
Snow Shoe,	Bellefonte & Snow Shoe R.R. Co.	Semi-bitum.	. .	1	. .	. .	. .	3	. .
Snow Shoe,	Bellefonte & Snow Shoe R.R. Co.	Semi-bitum.	. .	1	. .	. .	. .	3	. .
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Goss Run,	Berwind, White & Co.,	Semi-bitum.		1	. .	. .	1	. .	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Ocean,	Whitehead & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Ocean,	Whitehead & Co.,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	12	3
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	. .	1	.	. .
Webster,	Webster Coal Company, (limited)	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Excelsior,	Fisher Brothers & Miller,	Bituminous,	. .	1	. .	. .	1	8	. .
Penn,	Reakirt Brothers & Co.,	Bituminous,	. .	1	. .	. .	1	2	. .
Logan,	Barnhurst. Good & Co.,	Semi-bitum.	. .	1	.	. .	1	7	2
Laurel Run,	Nutall. Bacon & Co.,	Bituminous,	. .	1	. .	. .	1	5	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	.	1	2	. .
Glenwood,	Campbell Brothers,	Bituminous,	. .	1	. .	. .	1	3	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Morrisdale,	R. B. Wigton,	Bituminous,	. .	1	. .	. .	1	. .	. .
Sandy Lick,	Sandy Lick Coal Company,	Bituminous,	. .	1	. .	. .	1	. .	1
Mount Hope,	Jacob Elias,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Daguscahonda,	N. W. Mining and Ex. Company	Bituminous,	. .	1	. .	. .	1	6	. .
Cascade,	Kaul & Hall,	Bituminous,	. .	1	. .	. .	1	3	. .
Robertsdale,	Rockhill Iron and Coal Company,	Semi-bitum.	. .	1	. .	. .	1	2	1
Moredale,	Reakirt Brothers & Co.,	Semi-bitum.	. .	1	. .	. .	. .	2	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	12	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Clermont,	Buffalo Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	21	1
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	.	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	.	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	12	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of October, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
2	. .	2	208	56	74	338	51	5	15,042	2							
. .	. .	. .	139	37	31	207	17	5	14,000	2							
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2							
. .	. .	. .	. . .	. . .	. .	. . .	. . .	. .	. . . .	2							
3	80	5	72	15	33	120	18	. .	2,560	4	140	165	23,100				
. .	. .	. .	180	38	62	280	29	. .	12,723	5	90	74	6,660	90	8,100	100	9,000
2	50	2	60	20	34	114	18	1	4,039	3	88	120	10,560	120	10,560	145	12,760
. .	. .	. .	16	1	1	18	1	1	1,047	2	36	87	3,132	93	3,340	90	3,240
. .	. .	. .	70	8	10	88	6	2	5,672	2	54	200	9,910	192	9,520	208	9,810
. .	. .		31	3	1	35	2	2	2,455	2							
. .	. .	. .	28	3	9	40	4	. .	2,013	7	33	173	7,712	175	5,801	195	6,411
. .	. .	. .	38	5	5	48	3	. .	2,361	8	48						
. .	. .	. .	81	21	23	125	14	. .	7,447	2	57	190	13,345	185	13,081	180	12,768
. .	. .	. .	31	14	12	65	5	. .	5,466	3	56	175	11,746	165	11,202	160	10,931
. .	. .	. .	32	10	9	51	3	. .	. . . .	. . .	72	380	16,248	340	14,958	330	14,438
. .	. .	. .	280	20	20	320	20	4	22,000	2	45	500	22,500	510	22,950	490	22,050
. .	. .	. .	. .	. . .	. . .	. .	. . .	. .	. .	3							
1	. .	1	139	37	9	185	14	2	7,697	3	43	380	16,340	400	17,200	425	15,275
. .	. .	. .	111	26	29	166	7	2	6,125	4	46	270	12,420	260	11,960	290	13,340
. .	. .	. .	. .	. . .	. . .	. . .	. . .	. .	. .	. . .	45	250	11,250	240	10,800	270	12,150
. .	. .	. .	160	8	8	176	6	5	11,000	2	64	405	25,920	400	25,600	410	22,400
. .	. .	. .	25	4	. . .	29	3	2	2,500	2	40	160	6,400	160	6,400	165	6,660
. .	. .	. .	33	5	7	45	3	1	2,952	2	49	120	6,370	130	6,860	110	5,880
. .	. .	. .	22	8	6	40	4	2	2,756	2	34	90	4,216	120	5,236	70	3,536
. .	. .	. .	27	8	2	37	3	. .	2,764	2	36	130	5,964	115	5,436	120	5,544
. .	. .	. .	18	. . .	2	20	1	. .	. . . .	2	36	165	5,910	150	5,400	170	6,120
. .	. .	. .	104	15	12	131	6	10	5,523	4	40	60	3,977	70	4,428	50	3,567
. .	. .	. .	. . .	. . .	. . .	. . .	. .	. .	. . . .	2	27	90	4,820	80	4,484	70	4,401
. .	. .	3	50	2	7	59	4	2	. . . .	2	42	300	12,600	275	11,550	300	12.600
. .	1	1	50	4	6	60	5	. .	3,700	2	40	200	10,425	190	9,903	210	10,947
1	30	2	104	20	8	132	3	2	8,200	2	30	400	12,000	375	11,250	450	13,500
1	. .	1	25	8	8	41	. . .	. .	1,200	2	42	130	5,460	130	5,460	130	5,460
. .	. .	1	147	9	30	186	18	4	10,000	. . .	35	224	7,840	224	7,840	240	7,840
. .	. .	. .	27	3	2	32	2	. .	1,603	2	42	140	5,880	170	6,220	160	6,000
1	6	1	43	4	13	60	6	1	15,641	2	30	220	7,602	220	7,602	220	7,602
. .	. .	. .	91	15	32	138	15	2	. . . .	2	48	200	11,232	200	11,232	200	11,232
. .	. .	. .	112	22	32	166	7	. .	. . . .	2	78	170	15,982	170	15,982	170	15,980
. .	. .	. .	110	10	. . .	120	9	. .	6,501	. .	60						
. .	. .	. .	200	18	120	338	21	. .	14,879	2	33						
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . .	. . .	. . .	260	8,580	270	8,910	272	8,976
. .	. .	. .	20	9	9	38	7	. .	2,239	3	30	190	5,700	200	6,000	200	6,000
. .	. .	. .	35	20	16	71	8	. .	3,839	4	35	200	7,000	190	6,650	190	6,650
. .	. .	. .	240	113	63	422	51	1	. . . .	2	42	930	39,060	928	38,976	920	38,640
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	40	304	12,160	286	11,440	286	11,440
. .	. .	. .	. . .	. . .	. .	. . .	. . .	. .	. . . .	2	65	411	26,716	401	26,065	411	26,715
2	40	2	53	35	25	113	16	. .	5,706	3	90	280	25,200	270	24,300	300	27,000
. .	. .	. .	61	39	26	126	15	2	5,335	3	130	300	39,000	280	36,400	280	36,400
1	20	1	100	64	30	194	19	. .	9,138	2	90	280	25,200	290	26,000	290	26,100

A STATEMENT *of the Names, Power, Capacity, and Ventilation of the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Barclay,	...	...	...	120	5,760	120	5,760	150	7,200	90	4,320
Barclay,	...	...	...	...	...	...	...	...	...	...	...
Carbou Run,	...	...	...	110	330	111	2,664	129	3,096	119	2,256
Carbon Run,	...	...	...	199	2,388	159	1,908	129	1,548	179	2,148
Carbon Run,	...	...	...	...	...	...	...	...	...	...	...
Beunington Shaft,	171	24,940	168	67	2,814	...	...	...	...	69	2,998
Rolling-Mill Mine,	110	9,900	93	80	4,000	63	4,252	95	4,750	125	6,250
Blast Furnace Mine,	138	12,144	131	60	5,760	45	6,048	65	6,240	60	5,760
Conemaugh Mine,	90	3,240	90	45	1,485	85	1,485	46	1,518	46	1,518
Sonman,	208	10,630	196	...	...	...	...	...	...	...	...
Ben's Creek,	...	...	...	...	...	...	...	...	...	...	...
Suow Shoe,	242	8,002	196	175	5,274	185	5,565	204	6,147	241	7,275
Snow Shoe,	185	8,904	185	...	...	...	...	...	...	185	8,904
Eureka,	175	12,480	182	195	5,991	200	5,616	180	6,768	175	6,480
Goss Run,	165	11,202	166	210	11,141	230	11,576	160	11,931	165	11,202
Mapleton,	330	14,418	345	420	14,104	390	13,328	410	13,964	430	14,424
Ocean,	502	22,090	502	250	...	260	...	240	...	270	...
Ocean,	...	...	...	...	...	...	...	...	...	...	...
Franklin,	415	17,845	420	400	14,000	425	14,875	450	15,750	430	15,030
Webster,	300	13,800	310	170	6,800	190	7,600	200	8,000	180	7,200
Webster,	240	10,800	246	210	8,820	200	8,400	220	9,240	210	8,820
Excelsior,	408	23,112	405	220	14,500	225	14,650	230	15,180	230	15,310
Peun,	165	6,600	163	70	2,100	70	2,100	70	2,100	70	2,100
Logan,	115	6,125	118	100	3,465	1,010	3,780	95	3,070	100	3,465
Laurel Run,	145	6,086	106	120	4,312	100	3,752	50	2,352	140	4,872
Decatur,	100	4,824	114	60	3,760	60	3,760	70	416	60	376
Glenwood,	160	5,760	160	270	3,240	260	3,120	280	3,360	275	3,300
Morrisdale,	60	3,977	60	...	...	...	...	...	...	...	...
Morrisdale,	50	3,382	70	...	...	...	...	...	...	...	...
Saudy Lick,	275	11,550	280	300	12,600	275	11,550	300	12,600	275	11,550
Mount Hope,	195	10,164	199	155	3,875	150	1,750	165	4,125	155	3,875
Daguscahonda,	450	13,500	420	425	12,750	390	11,700	450	13,500	465	13,950
Cascade,	130	5,460	130	180	5,040	180	5,040	180	5,040	180	5,040
Robertsdale,	224	7,840	224	...	...	...	...	...	...	...	...
Moredale,	150	5,920	150	90	3,200	120	4,100	100	3,800	90	3,200
McIntyre,	220	7,602	220	150	5,565	150	5,565	150	5,565	150	5,565
McIutyre,	200	11,232	200	160	5,856	160	5,856	160	5,856	160	5,856
McIutyre,	170	15,982	170	200	7,488	180	6,867	180	6,867	180	6,867
Clermont,	250	15,000	250	...	...	...	...	...	...	460	9,200
Antrim,	...	...	...	...	...	...	...	...	...	...	...
Antrim,	275	9,075	469	220	6,160	219	6,132	221	6,188	225	6,300
Fall Brook,	210	6,300	200	120	2,880	135	3,240	130	3,120	135	3,240
Fall Brook,	210	7,350	197	110	2,860	105	2,730	115	2,990	120	3,120
Arnot,	800	37,800	919	300	7,200	304	7,296	320	7,680	340	8,160
Arnot,	519	20,760	348	340	10,200	320	9,600	250	7,500	232	6,960
Arnot,	429	27,885	413	591	13,184	662	15,888	680	16,320	698	16,752
Morris Run,	280	25,200	280	110	5,500	100	5,000	110	5,500	100	5,000
Morris Run,	300	39,000	290	120	4,800	112	4,400	100	4,000	120	4,800
Morris Bun,	280	25,200	280	120	4,800	130	5,200	130	5,200	110	4,400

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION.
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of sq. feet.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	
40	41	42	43	44	45	46	47	48	49	50	51
120	64	400	25,600	460	29,440	600	38,400	360	23,440	29,170	Barclay, Bradford county.
. . .	71	450	18,790	510	23,050	480	28,115	440	18,790	2,442	Barclay, Bradford county.
118	91	309	28,119	199	18,109	229	20,839	169	15,379	20,611	Carbon Run, Bradford county
160	31	319	10,048	419	13,198	399	12,568	449	14,143	12,489	Carbon Run, Bradford county
. . .	50	149	7,450	159	7,950	219	10,950	219	10,950	9,320	Carbon Run, Bradford county
68	352	521	18,301	. . .	. . . .	. .	. . . .	55	19,360	18,832	Bennington, Blair county.
96	38	350	13,300	350	13,300	350	13,300	400	15,200	13,775	Johnstown, Cambria county.
62	61	345	21,045	350	21,350	350	21,350	350	21,350	21,289	Johnstown, Cambria county.
46	31	100	3,100	112	3,472	115	3,555	150	4,650	3,697	Conemaugh, Cambria county.
. . .	28	302	8,730	306	9,230	317	10,420	312	10,720	10,220	Souman, Cambria county.
. . .	. . .	. . .	. . . .	. . .	. . . .	. . .	. . .	. . .	. . .	. . . .	Ben's Creek, Cambria county.
202	31	195	6,636	204	6,696	223	7,792	321	10,934	9,800	Snow Shoe, Centre county.
185	41	. . .	. . . .	. . .	. . . .	. . .	. . .	234	9,591	9,100	Snow Shoe, Centre county.
182	30	290	8,353	300	8,608	310	8,850	320	9,110	8,732	Houtzdale, Clearfield county.
166	35	315	12,439	325	12,789	315	12,439	310	12,265	12,483	Goss Run, Clearfield county.
412	. . .	260	14,061	240	13,056	250	13,536	260	14,061	13,653	Mapleton, Clearfield county.
255	61	280	17,080	290	17,690	280	17,080	290	17,690	17,020	Goss Run, Clearfield county.
. . .	45	230	10,350	240	10,800	220	9,920	230	10,350	10,100	Goss Run, Clearfield county.
425	63	700	44,100	725	45,675	750	44,250	715	45,045	45,517	Houtzdale, Clearfield county.
185	27	680	18,360	660	17,820	700	18,900	710	19,170	18,562	Goss Run, Clearfield county.
215	30	550	16,500	530	15,900	560	16,800	580	17,560	16,650	Goss Run, Clearfield county.
226	36	660	23,760	660	23,976	660	23,760	660	23,976	23,720	Goss Run, Clearfield county.
70	15	650	9,750	650	9,750	650	9,750	700	10,500	10,000	Houtzdale, Clearfield county.
101	30	350	11,550	350	11,550	330	10,800	340	11,100	11,250	Laurel Run, Clearfield co.
102	36	80	4,104	110	5,184	60	3,384	140	6,264	4,734	Laurel Run, Clearfield co.
62	20	130	328	120	3,080	150	3,680	130	3,280	3,330	Decatur, Clearfield county.
271	25	225	5,625	210	5,250	230	5,750	220	5,500	5,560	Glenwood, Clearfield county.
. . .	40	70	4,320	88	4,720	60	3,920	70	4,320	4,420	Morrisdale, Clearfield county.
. . .	32	200	3,212	240	4,932	120	2,826	140	3,186	3,539	Morrisdale, Clearfield county.
284	42	300	12,600	275	11,550	300	12,600	275	11,550	12,840	Du Bois, Clearfield county.
156	40	225	9,450	240	10,008	235	9,870	220	9,180	9,895	Mt. Hope, Cameron county.
432	30	450	13,500	400	12,000	450	13,500	480	14,400	13,620	Daguscahonda, Elk county.
180	24	220	5,280	220	5,280	220	5,280	220	5,280	5,280	St. Mary's, Elk county.
. . .	. . .	. .	. . . .	. . .	. . . .	. . .	. . . .	. . .	. .	. . . .	Robertsdale, Huntingdon co.
110	. . .	. . .	. . . .	. . .	.	. . .	. . .	. .	. .	. . . .	Moredale, Huntingdon co.
150	20	200	9,828	200	9,828	200	9,828	200	9,828	9,828	McIntyre, Lycoming county.
160	25	260	14,209	260	14,025	260	14,025	260	14,025	14,025	McIntyre, Lycoming county.
190	42	270	16,906	270	16,906	270	16,906	270	16,906	16,906	McIntyre, Lycoming county.
460	40		. .	. .	. . . .	. . .	. . . .	308	12,320	12,320	Clermont, McKean county.
. . .	35	500	17,560	475	16,625	480	16,800	464	1,624	16,800	Antrim, Tioga county.
221	27	320	8,640	375	9,125	390	10,530	393	10,617	9,726	Antrim, Tioga county.
130	30	220	6,600	205	6,150	210	6,300	225	6,750	6,450	Fall Brook, Tioga county.
112	60	340	20,400	330	19,800	335	20,100	340	20,400	2,175	Fall Brook, Tioga county.
316	72	205	14,760	286	20,592	280	21,160	260	18,720	18,558	Arnot, Tioga county.
285	40	572	22,880	493	19,720	501	20,040	501	20,040	20,670	Arnot, Tioga county.
657	70	393	27,510	393	27,510	384	26,880	411	28,770	27,667	Arnot. Tioga county,
105	22	570	41,040	560	40,320	600	43,200	570	41,040	42,680	Morris Run, Tioga county.
113	66	610	40,260	580	38,280	580	38,280	610	40,260	39,220	Morris Run, Tioga county.
123	52	600	31,200	620	32,240	620	32,240	620	32,240	32,090	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
James Carrigan, ...	25	Married, . .	. . . .	October 1, . .	. . . .
David John,*	31	Married, . .	3	October 1, . .	October 1, . .
Thomas B. Davis,* . . .	35	Married, . .	2	October 1, . .	October 1, . .
John Vaughn, ...	28	Married, . .	. . . .	October 2, . .	. . . .
George Pusee, ...	50	Married, . .	. . . .	October 7, . .	. . . .
Richard Creeber, . . .	35	Married, . .	. . . .	October 30, . .	. . . .

* Verdict: That David John and Thomas B. Davis came to their death by a fall of coal, through their neglect in not spragging their coal in a proper manner. And further say, from the evidence given, that no blame can be attached to the firm or company of Fisher Brother & Miller, or their superintendent in charge.

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of October, 1878:

NATURE OF ACCIDENT.	REMARKS.
Arm broken,	At Robertsdale colliery, Robertsdale, Huntingdon county, by fall of coal.
Killed,	At Excelsior colliery, Goss Run, Clearfield county, by fall of coal.
Killed,	At Excelsior colliery, Goss Run, Clearfield county, by fall of coal.
Leg broken,	At Arnot colliery, Arnot, Tioga county, by being caught between mining cars.
Foot bruised,	At Eureka colliery, Houtzdale, Clearfield county. Cause not given.
Body bruised,	At McIntyre colliery, Lycoming county. Struck by empty mining cars.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the*
vania, for the Month

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps, how many.
1	2	3	4	5	6	7	8	9	10
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	..	1	..	..	1		
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	..	1	..	..	1		
Carbon Run,	Shraeder Coal Company,	Semi-bitum.	..	1	..	..	1		
Barclay,	Towanda Coal Company,	Semi-bitum.	..	1	..	..	1	..	2
Barclay,	Towanda Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Barclay,	Towanda Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Porter,	Denniston, Porter & Co.,	Semi-bitum.	..	..	1	..	..	3	..
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	..	..	1	1	..	6	1
Rolling-Mill,	Cambria Iron Company,	Semi-bitum.	..	1	..	..	1	6	..
Blast Furnace,	Cambria Iron Company,	Semi-bitum.	1	..	..	..	1	3	2
Conemaugh,	Cambria Iron Company,	Semi-bitum.	..	1	..	..	1	2	..
Woodvale,	Cambria Iron Company,	Semi-bitum.	..	1	..	..	1	2	..
Sonman,	Dysart & Co.,	Semi-bitum.	..	1	..	..	1	..	..
Snow Shoe,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	..	1	..	..	..	3	..
Snow Shoe,	Bellefonte & Snow Shoe R. R. Co.,	Bituminous,	..	1	..	..	..	4	..
Mount Hope,	C. Elias & Co.,	Semi-bitum.	..	1	..	..	1	..	..
Eureka,	Berwind, White & Co.,	Semi-bitum.	..	1	..	..	1	..	..
Goss Run,	Berwind, White & Co.,	Semi-bitum.	..	1	..	..	1	..	..
Mapleton,	Berwind, White & Co.,	Semi-bitum.	..	1	..	..	1	..	..
Franklin,	Kittanning Coal Company,	Bituminous,	..	1	..	..	1	12	3
Logan,	Barnburst, Good & Co.,	Semi-bitum.	..	1	..	..	1	7	1
Beaver Run,	Barnburst, Good & Co.,	Bituminous,	1	..	..	..	1	2	2
Penn,	Reakert Bro. & Co.,	Bituminous,	..	1	..	..	1	2	..
Webster,	Webster Coal Company, limited,	Semi-bitum.	..	1	..	..	1	..	..
Webster,	Webster Coal Company, limited,	Semi-bitum.	..	1	..	..	1	..	..
Excelsior,	Fisher Bro. & Miller,	Bituminous,	..	1	..	..	1	8	..
Moshannon,	Moshannon Coal Company,	Bituminous,	..	1	..	..	1	2	..
Glenwood,	Campbell Bro.,	Bituminous,	..	1	..	..	1	3	..
Decatur,	Decatur Coal Company,	Bituminous,	..	1	..	..	1	2	..
Laurel Run,	Nuttall, Bacon & Co.,	Bituminous,	..	1	..	..	1	6	..
Sandy Lick,	Sandy Lick Coal Company,	Bituminous,	..	1	..	..	1	..	1
Cascade,	Kaul & Hall,	Bituminous,	..	1	..	..	1	2	..
Silver Creek,	D. Eldridge,	Bituminous,	..	1	..	..	1	4	..
Daguscahonda,	North-Western M. and Ex. Co.,	Bituminous.	..	1	..	..	1	5	..
Robertsdale,	Rockbill Iron and Coal Co.,	Semi-bitum.	..	1	..	..	1	3	1
Fisher Mines,	Fishers & Miller,	Semi-bitum.	..	1	..	..	1	..	..
Moredale,	Reakirt Bro. & Co.,	Semi-bitum.	..	1	..	..	..	2	..
Carbon,	J. F. Mears & Co.,	Semi-bitum.	..	1	..	..	..	5	..
McIntyre,	McIntyre Coal Company,	Semi-bitum.	..	1	..	..	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum.	..	1	..	..	1	12	..
McIntyre,	McIntyre Coal Company,	Semi-bitum.	..	1	..	..	1	8	..
Clermont,	Buffalo Coal Company,	Bituminous,	..	1	..	..	1	..	..
Antrim,	Fall Brook Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Antrim,	Fall Brook Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	..	1	..	..	1	5	..
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	..	1	..	..	1	21	1
Arnot,	Blossburg Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Arnot,	Blossburg Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Arnot,	Blossburg Coal Company,	Semi-bitum.	..	1	..	..	1	..	..
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	..	1	..	..	1	5	..
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	..	1	..	..	1	8	..
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	..	1	..	..	1	12	..

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of November, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
. .	. .	. .	135	37	30	202	17	5	12,000	2							
2	. .	2	208	56	74	338	51	5	18,000	2							
. .	. .	. .	. . .	. . .	. . .	. . .	.	. .	. . . .	2							
. .	. .	. .	. . .	. .	. . .	. . .	. . .	. .	. . . .	2							
1	20	2	38	9	21	68	10	1	2,900	2	40	300	12,000	300	12,000	300	12,000
3	108	5	102	22	39	163	18	. .	6,975	2	140	171	23,940	173	24,220	206	28,840
. .	. .	. .	185	40	62	287	30	. .	12,580	5	90	100	9,000	95	8,550	100	9,000
2	50	2	70	22	37	129	19	1	4,645	3	88	130	11,440	125	11,000	135	11,880
. .	. .	. .	17	2	1	20	1	1	1,176	2	36	75	2,700	80	2,880	70	2,520
. .	. .	. .	18	4	1	23	1	1	1,302	2	35	75	2,625	90	3,150	83	2,905
. .	. .	. .	80	8	10	98	6	2	3,442	2	54	262	9,908	202	9,820	210	9,808
. .	. .	. .	28	3	9	40	4	. .	1,883	2	33	282	9,322	272	9,002	292	9,142
. .	. .	. .	32	5	5	42	5	. .	3,677	2	48	234	11,232	224	10,766	243	11,699
1	.	1	45	5	7	57	5	. .	2,000	2	40	200	10,425	190	9,903	210	10,917
. .	. .	. .	82	17	25	124	17	. .	7,185	2	59	185	13,051	180	12,768	190	13,345
. .	. .	. .	60	6	9	75	5	. .	5,553	2	56	175	11,746	160	10,931	165	11,202
. .	. .	. .	34	3	8	45	3	. .	. .	2	42	260	12,264	. .	. . . . .	230	11,046
1	. .	1	137	47	14	198	15		7,597	2	43	470	21,100	475	20,425	465	20,195
. .	. .	. .	35	7	6	48	3	1	3,788	2	49	115	6,125	122	6,370	125	6,615
1	40	2	44	10	5	59	4	1	250	2	42	213	10,206	245	10,290	242	10,164
. .	. .	.	34	3	7	44	3	2	2,312	2	40	150	7,200	150	7,200	150	7,200
. .	. .	. .	90	25	20	135	5	. .	2,538	2	46	270	1,242	270	12,420	260	11,960
. .	. .	. .	. .	. . .	. . .	. .	. . .		. . . .	. .	45	240	11,240	250	11,680	230	11,160
. .	. .	. .	170	14	4	188	6	5	11,000	2	64	340	21,760	345	22,800	330	20,920
. .	. .	. .	33	6	5	44	4	1	2,427	2	56	175	9,800	188	10,080	170	9,520
. .	. .	. .	20	. .	1	21	1	. .	1,079	2	30	175	5,250	185	5,550	160	4,800
. .	. .	.	29	8	2	39	3	. .	4,573	2	36	100	4,824	200	8,124	75	3,924
. .	. .	.	27	8	6	41	4	2	3,728	2	34	90	4,216	120	5,236	120	5,236
. .	. .	2	50	4	8	62	4	2	. . . .	2	42	225	9,450	200	8,400	200	8,400
1	. .	1	30	10	8	48	. . .	. .	1,800	2	42	130	5,502	130	5,502	130	5,502
. .	. .	. .	56	15	9	80	. . .	6	2,568	3	30	180	5,400	180	5,400	170	5,100
1	30	2	120	20	8	148	3	2	7,800	2	30	450	13,500	400	12,000	450	13,500
1	30	2	166	6	30	202	14	5	9,755	2	30	500	15,000	480	14,400	460	13,800
. .	. .	. .	18	4	4	26	1	1	950	2	42	180	7,560	170	7,140	180	7,560
. .	. .	. .	25	4	5	34	3	. .	1,158	2	42	130	5,460	120	5,040	140	5,880
. .	. .	. .	15	7	3	25	2	1	317	2	40						
1	6	1	43	4	13	60	6	1	15,301	2	30	215	7,456	225	7,747	190	6,729
. .	. .	. .	94	15	32	141	15	3	. . . .	2	48	205	11,464	220	12,163	215	11,930
. .	. .	. .	112	22	32	166	7	. .	. .	2	78	180	16,738	186	17,192	168	15,908
. .	. .	. .	100	. . .	12	112	8	. .	6,562	2	30	25	15,000	273	16,380	260	15,600
. .	. .	. .	208	19	120	347	21	. .	14,420	2	33						
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	. .	33	270	8,910	275	9,075	260	8,580
.	. .	. .	20	9	9	38	7	. .	3,087	3	30	180	5,400	190	5,700	185	5,650
. .	. .	. .	35	20	16	71	8	. .	5,236	4	35	210	7,350	200	7,000	190	6,825
.	. .	. .	244	112	66	422	51	1	. . . .	2	72	240	16,776	220	15,840	240	17,280
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	. .	40	501	22,400	626	25,040	572	22,880
. .	. .	. .	. . .	. . .	. . .	. .	. . .	. .	. . . .	. .	65	554	36,010	519	33,235	410	26,650
2	40	2	50	34	25	109	16	.	6,762	3	90	300	27,000	280	25,200	290	26,100
. .	. .		61	39	26	126	15	2	6,980	3	130	300	29,000	320	41.600	300	39,000
1	20	1	100	64	30	194	19	. .	12,170	2	90	300	27,000	320	28,800	300	27,000

A STATEMENT *of the Names, Power, Capacty, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average air current per month at inlet.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
1	29	30	31	32	33	34	35	36	37	38	39
Carbon Run,	...	...	...	59	590	59	590	69	690	79	790
Carbon Run,	...	...	...	159	1,908	159	1,908	159	1,908	169	2,028
Carbon Run,	...	...	...	...	...	...	...	...	...	...	...
Carbon Run,	...	...	...	...	...	...	...	...	...	...	...
Barclay,	...	...	...	130	6,2.0	100	4,800	120	5,760	90	4,320
Barclay,	...	...	...	...	...	...	...	...	...	...	...
Barclay,		..	...	...	...	...	...	...	...	...	...
Porter,	380	15,200	...	...	...	...	...	...	...	...	...
Bennington Shaft,	203	28,420	188	157	6,594	163	6,846	171	7,182	180	7,560
Rolling-Mill,	110	9,900	110	98	4,900	95	4,750	100	5,000	128	6,400
Blast Furnace,	150	13,200	135	65	6,240	62	5,952	75	7,200	66	6,336
Conemaugh,	85	3,060	77	40	1,320	45	1,485	40	1,320	42	1,386
Woodvale,	95	3,325	86	40	1,200	48	1,440	45	1,350	48	1,440
Sonman,	206	10,810	210	...	...	...	...	...	...	...	...
Snow Shoe,	302	9,995	294	272	8,184	282	8,475	292	8,766	283	9,925
Snow Shoe,	253	12,163	246	253	10,896	261	11,227	272	11,730	261	11,227
Mount Hope,	195	10,164	199	155	3,875	150	3,750	165	4,125	155	3,875
Eureka,	200	13,051	190	220	6,081	210	5,848	220	6,081	200	5,561
Goss Run,	150	10,358	162	230	11,576	220	11,149	200	9,945	190	9,532
Mapleton,	185	9,828	230	460	15,120	...	...	230	11,046	200	9,828
Franklin,	480	20,640	472	500	17,500	485	16,975	500	17,500	460	16,100
Logan,	120	6,370	120	90	2,992	95	3,150	90	2,992	90	2,992
Beaver Run,	246	10,332	245	203	3,075	205	5,125	202	5,050	207	5,145
Penn,	150	7,200	150	65	2,300	65	2,300	65	2,300	65	2,300
Webster,	300	13,800	275	160	6,400	170	6,800	190	7,600	180	7,200
Webster,	270	12,000	247	200	8,400	200	8,400	210	8,820	230	9,660
Excelsior,	340	21,760	438	325	11,700	330	11,880	325	11,700	330	11,880
Moshannon,	200	11,200	185	180	7,920	175	7,700	170	7,480	200	8,800
Glenwood,	190	5,700	177	90	2,160	95	2,280	120	2,880	110	2,640
Decatur,	100	4,824	118	100	4,288	100	4,288	60	3,008	100	4,288
Laurel Run,	120	5,236	112	80	3,192	110	4,032	120	4,312	120	4,312
Sandy Lick,	200	8,400	200	225	9,450	200	8,400	200	8,400	200	8,400
Cascade,	130	5,502	130	215	5,160	215	5,160	215	5,160	215	5,160
Silver Creek,	160	4,800	173	100	2,700	75	2,025	86	2,302	74	1,998
Daguscahonda,	480	14,400	445	475	14,250	425	12,750	450	13,500	490	14,700
Robertsdale,	470	14,100	477	450	13,500	425	12,750	415	12,450	425	12,450
Fisher Mines,	170	7,140	175	160	3,200	170	3,400	165	3,300	160	3,200
Moredale,	140	5,880	134	110	4,620	100	4,200	130	5,460	120	5,040
Carbon,	.	...	...	...	...	...	...	...	...	...	...
McIntyre,	188	6,700	204	148	5,515	153	5,622	160	5,856	143	5,361
McIntyre,	217	12,023	214	161	5,885	164	5,972	170	6,147	152	5,623
McIntyre,	155	14,847	172	382	14,417	395	15,820	370	14,044	236	12,989
Clermont,	300	18,000	270	409	8,998	420	9,240	386	8,492	432	9,504
Antrim,	.	...	...	...	...	...	...	...	...	...	...
Antrim,	250	8,250	263	219	6,132	210	5,880	205	5,740	206	5,763
Fall Brook,	195	5,850	187	125	3,000	125	3,000	115	2,760	130	3,120
Fall Brook,	210	7,350	203	115	2,990	110	2,860	120	3,120	130	3,380
Arnot,	230	16,560	230	200	6,000	210	6,300	190	5,700	420	6,600
Arnot,	608	24,320	576	250	8,000	280	8,960	268	8,576	196	6,272
Arnot,	400	36,000	470	805	19,320	733	17,537	625	15,048	600	14,400
Morris Run,	300	27,000	293	120	6,000	110	5,500	110	5,500	120	6,000
Morris Run,	320	41,600	310	120	4,800	130	5,200	120	4,800	130	5,200
Morris Run,	300	27,000	305	130	5,200	140	5,600	130	5,200	130	5,200

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											LOCATION
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq feet	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month	
40	41	42	43	44	45	46	47	48	49	50	51
. . .	91	209	19,019	299	27,209	379	24,489	319	29,029	27,436	Carbon Run, Bradford co.
. . .	30	309	9,270	289	8,670	339	10.170	319	9,570	9,420	Carbon Run, Bradford co.
. . .	31	419	13,298	479	15,088	409	12,883	429	13,513	13,695	Carbon Run, Bradford co.
. . .	33	219	7,227	219	7.227	209	6,697	199	6,567	6,929	Carbon Run, Bradford co.
110	64	500	32,000	500	32,000	550	35,200	570	36,480	33,420	Barclay, Bradford county.
. . .	36	270	4,720	290	10,440	370	13,326	410	14,760	12,061	Barclay, Bradford county.
. . .	36	210	8,410	270	9,220	310	11,289	320	11,520	10,735	Barclay, Bradford county.
. . .	40	300	13,200	320	15,000	310	14,680	300	13,200	14.800	Porterville, Blair county.
170	352	60	21,120	58	20,416	72	25,311	68	23,936	22,904	Bennington, Blair county.
105	38	350	13,300	350	13,300	375	14,250	400	15,200	14,022	Johnstown, Cambria county.
67	61	300	21,350	355	21,655	360	21,960	365	22,265	21,807	Johnstown, Cambria county.
42	31	110	3,410	115	3,565	110	3,410	100	3,100	3,379	Johnstown, Cambria county.
45	30	100	3,000	120	3,600	130	3,900	120	3,600	3,525	Johnstown, Cambria county.
. . .	28	298	8,729	302	9,308	319	10,808	346	10,903	9,860	Sonman, Cambria county.
268	31	292	9,934	282	9,605	302	10,298	311	10,594	10,108	Snow Shoe, Centre county.
258	41	282	11,582	272	11,184	292	11,980	301	12,375	11,779	Snow Shoe, Centre county.
156	40	225	9,450	240	10,080	235	9,870	220	9,180	9,895	Cameron, Cameron county.
210	28	310	8,858	300	8,608	310	8,558	320	9,110	8,920	Houtzdale, Clearfield county.
206	34	310	12,265	315	12,439	300	11,916	295	11,741	12.000	Houtzdale, Clearfield county.
230	48	300	15,888	. . .	. .	250	14,928	260	1,416	14,911	Mapleton, Clearfield county.
486	63	750	47,150	650	40,950	700	44,100	675	42,515	43,706	Houtzdale, Clearfield county.
91	30	340	11,100	315	11,250	340	11,100	340	11,100	11,137	Osceola Mills, Clearfield co.
205	33	503	16,098	505	16,160	502	16,640	507	16,221	16,200	Houtzdale, Clearfield county.
65	15	700	10,500	700	10,500	700	10,500	700	10,500	10,500	Houtzdale, Clearfield county.
172	27	650	17,550	660	17,820	700	13,900	680	18,360	18,157	Houtzdale, Clearfield county.
210	30	530	15,900	520	15,600	560	16,800	570	17,100	16,100	Houtzdale, Clearfield county.
325	36	640	23,040	645	23,210	650	23,400	640	23,040	23,172	Houtzdale, Clearfield county.
180	41	200	8,800	250	11,000	180	7,980	225	9,900	10,610	Sobieski, Clearfield county.
103	30	200	6,000	225	6,750	230	6,900	2 0	6,900	6,637	Glenwood, Clearfield county.
90	20	100	2,680	300	6,680	75	2,180	100	2,680	3,555	Decatur, Clearfield county.
107	36	80	4,104	100	4,824	115	5,364	115	5,364	4,914	Laurel Run, Clearfield co.
200	. . .	. . .	. .	. . .	. . .	. . .	. . . .	. .		. .	Dubois, Clearfield county.
215	24	225	5,400	225	5,400	225	5,400	225	5,400	5,400	St. Mary's, Elk county.
144	12	230	2,760	195	2,310	170	2,040	200	2,400	2,500	St. Mary's, Elk county.
460	30	500	15,000	450	13,500	450	13,500	500	15,000	14,620	Daguscahonda, Elk county.
428	25	500	15,000	480	14,400	460	13,800	470	14,100	14,325	Robertsdale, Huntingdon co.
163	36	140	5,040	145	5,220	140	5,040	145	5,010	5,035	Moredale, Huntingdon co.
115	. . .	. . .	. . . .	. . .	. . . .	. .	. . . .	.	. . . .	. . . .	Moredale, Huntingdon co.
. . .	. . .	. . .	. .	. . .	. .	. . .	. .	. . .	. . . .	.	Broad Top City, Hunt'don co.
151	23	194	9,163	207	10,113	220	10,642	200	9,828	9,936	McIntyre, Lycoming county,
161	25	270	14,491	290	15,422	280	14,956	297	15,748	15,154	McIntyre, Lycoming county.
370	42	280	17,449	284	17,666	260	16,363	250	15,820	16,824	McIntyre, Lycoming county.
412	40	288	11,520	300	12,000	275	11,000	306	12,240	11,690	Clermont, McKean county.
. . .	35	465	16,275	480	16,800	475	16,625	464	16,240	16,500	Antrim, Tioga county.
210	27	295	9,735	375	9,125	320	8,640	300	8,100	9,400	Antrim, Tioga county.
123	30	225	6,750	235	7,050	230	6,900	235	7,050	6,937	Fall Brook, Tioga county.
181	60	306	18,000	275	16,500	290	17,400	310	18,600	17,625	Fall Brook, Tioga county.
325	42	805	33,810	390	16,380	383	16,086	370	15,440	20,479	Arnot, Tioga county.
200	40	464	18,600	590	23,600	537	21,480	483	19,320	27,550	Arnot, Tioga county.
680	70	491	34,370	465	32,550	393	27,510	380	26,600	30,258	Arnot, Tioga county.
115	72	610	43,920	580	47,660	600	43,200	610	43,920	42,620	Morris Run, Tioga county.
125	66	6 0	42,620	640	42,240	620	40,920	640	42,240	41,820	Morris Run, Tioga county.
133	52	620	32,240	640	33,280	620	32,240	660	34,320	33,260	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several collieries,*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
Robt. Fleming, senior, .	50	Married, . .	. . . .	November 12,	. . . .
Thomas Mark, ...	14	Single, . . .	. . . .	November —,	. . . .
Judson Coe, ...	14	Single, . . .	. . . .	November —,	. . . .
Thomas Kelly, ...	. . .	Married, . .	. . . .	November 15,	. . . .
William P. Chambers, .	52	Married, . .	. . . .	November 19,	. . . .
John Johnston, ...	50	Married, . .	. . . .	November 23,	. . . .
Michael McLaughlin, .	25	Single, . . .	. . . .	November 25,	. . . .
Charles Husted, ...	25	Single, . . .	. . . .	November 25,	. . . .
John T. Cullen, ...	26	Single, . . .	. . . .	November 26,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, &c., in said district, for the month of November, 1878:

NATURE OF ACCIDENT.	REMARKS.
Collar-bone broken, ...	At Arnot mine, Tioga county; by fall of coal.
Arm bruised, ...	At McIntyre mine, Lycoming county; by being caught in wheel of mine car.
Arm bruised, ...	At McIntyre mine, Lycoming county; by being caught in wheel of mine car.
Collar-bone broken, ...	At Antrim mine, Tioga county; by fall of coal.
Leg broken and back injured, ...	At Fall Brook mine, Tioga county; by fall of stone from roof.
Body bruised, ...	At Robertsdale mine, Huntingdon county; by fall of rock.
Foot crushed, ...	At Robertsdale mine, Huntingdon county; by fall of rock.
Body bruised, ...	At Arnot mine, Tioga county; by falling off mine car.
Leg broken, ...	At Robertsdale mine, Huntingdon county; by fall of rock.

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the vania, for the Month*

NAME OF COLLIERY.	NAME OF OPERATOR.	Character of coal—bituminous or semi-bituminous.	Slope.	Drift.	Shaft.	Fan.	Furnace.	Number of headings.	Pumps—how many.
1	2	3	4	5	6	7	8	9	10
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	6	1
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1	4	1
Barclay,	Towanda Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Carbon Run,	Schraeder Coal Company,	Semi-bitum.	. .	1	. .	. .	1		
Porter,	Denuiston, Porter & Co.,	Semi-bitum.	. .	. .	1	. .	. .	. .	. .
Bennington Shaft,	Blair Iron and Coal Company,	Semi-bitum.	. .	. .	1	1	. .	8	1
Rolling-Mill Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	1	. .	6	. .
Blast Furnace Mine,	Cambria Iron Company,	Semi-bitum.	1	. .	. .	. .	1	3	2
Conemaugh Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Woodvale Mine,	Cambria Iron Company,	Semi-bitum.	. .	1	. .	. .	1	2	. .
Ben's Creek,	S. H. Smith,	Semi-bitum.	. .	1	. .	. .	. .	4	. .
Moshannon,	Moshannon Coal Company,	Bituminous,	. .	1	. .	. .	1	4	.
Franklin,	Kittanning Coal Company,	Bituminous,	. .	1	. .	. .	1	12	3
Penn,	Reakirt Bros. & Co.,	Bituminous,	. .	1	. .	. .	1	3	. .
Beaver Run,	Barnhurst, Good & Co.,	Bituminous,	. .	1	. .	. .	1	2	2
Eureka,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	1	.
Goss Run,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	3	. .
Mapleton,	Berwind, White & Co.,	Semi-bitum.	. .	1	. .	. .	1	4	. .
Excelsior,	Fisher Bro. & Miller,	Bituminous,	. .	1	. .	. .	1	8	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	7	. .
Ocean,	Whitehead & Co.,	Bituminous,	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Company, limited,	Bituminous,	. .	1	. .	. .	1	. .	. .
Webster,	Webster Coal Company, limited,	Bituminous,	. .	1	. .	. .	1	. .	. .
Sterling, No. 2,	Robert H. Powell,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Sterling, No. 2,	Robert H. Powell,	Semi-bitum.	. .	1	. .	. .	. .	. .	. .
Logan,	Barnhurst, Good & Co.,	Semi-bitum.	. .	1	. .	. .	1	7	. .
Laurel Run,	Nuttall, Bacon & Co.,	Bituminous,	. .	1	. .	. .	1	4	. .
Decatur,	Decatur Coal Company,	Bituminous,	. .	1	. .	. .	1	4	. .
Glenwood,	Campbell & Bros.,	Bituminous,	. .	1	. .	. .	1	4	. .
Sandy Lick,	Sandy Lick Coal Company,	Bituminous,	.	1	. .	. .	1	. .	1
Cascade,	Kaul & Hall,	Bituminous,	. .	1	. .	. .	1	3	. .
Daguscahonda,	North-Western M. and Ex. Co.,	Bituminous,	.	1	. .	. .	1	5	. .
Robertsdale,	Rock Hill Iron and Coal Co.,	Semi-bitum.	. .	1	. .	. .	1	3	1
Fisher,	Fisher & Miller,	Semi-bitum.	. .	1	. .	. .	1	6	. .
Moredale,	Reakirt Bros. & Co.,	Semi-bitum.	. .	1	. .	. .	1	2	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	10	1
McIntyre,	McIntyre Coal Company,	Semi-bitum,	. .	1	. .	. .	1	12	. .
McIntyre,	McIntyre Coal Company,	Semi-bitum.	. .	1	. .	. .	1	8	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Antrim,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Fall Brook,	Fall Brook Coal Company,	Semi-bitum,	. .	1	. .	. .	1	5	1
Fall Brook,	Fall Brook Coal Company,	Semi-bitum.	. .	1	. .	. .	1	21	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Arnot,	Blossburg Coal Company,	Semi-bitum.	. .	1	. .	. .	1	. .	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	5	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum,	. .	1	. .	. .	1	8	. .
Morris Run,	Morris Run Coal Mining Co.,	Semi-bitum.	. .	1	. .	. .	1	12	. .

respective Collieries in the Third Bituminous Mine District of Pennsyl-
of December, 1878.

										VENTILATION.							
												1ST WEEK.		2D WEEK.		3D WEEK.	
Number of engines.	Horse power.	Boilers—how many.	Number of miners—men.	Number of miners—boys.	Other persons.	Total number of persons.	Number of mules inside.	Number of mules outside.	Total production in tons.	Number of openings.	Inlet—size of—sq. feet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
. .	. .	. .	220	57	74	351	56	7	12,774	4							
. .	2	2															
. .	. .	. .	135	37	30	202	17	5	8,000	8							
1	20	2	52	10	24	86	10	2	3,100	2	54	400	23,112	380	19,760	410	24,000
3	40	5	104	23	41	168	24	. .	7,400	4	140	. . .	27,800	. . .	26,900	. . .	28,600
. .	. .	. .	185	40	62	287	30	. .	12,776	5	90	98	8,880	100	9,000	110	9,900
2	60	2	70	22	37	129	19	1	3.956	3	88	136	11,968	130	11,440	129	11,352
. .	. .	. .	16	2	1	19	1	1	1,068	2	36	76	2,736	78	2,088	80	2,880
. .	. .	. .	20	2	2	24	2	1	1,400	2	35	99	3,463	100	3,500	100	3,850
. .	. .	. .	33	2	. . .	35	2	2	2,541	4							
. .	. .	. .	31	6	5	42	5	1	1,602	4	56	225	12,600	175	9,800	200	11,200
1	. .	1	158	32	14	204	14	.	6,500	3	43	480	20,640	485	20,855	475	20,425
. .	. .	. .	30	5	5	40	3	2	2,094	4	42	80	3,729	85	4,025	98	4,500
1	4	2	44	10	6	60	4	1	2,300	2	42	213	8,946	203	8,526	196	3,232
. .	.	. .	80	19	25	124	17	. .	4,797	2	59	200	13,923	190	13,345	210	14,500
. .	. .	. .	90	17	14	121	9	. .	7,761	2	56	200	13,104	190	12,568	185	12,289
. .	. .	. .	30	4	9	43	3		. . . .	4	72	300	13,548	310	14,238	310	14,830
. .	. .	. .	160	8	10	178	7	6	10,000	2	64	310	21,760	345	22,080	340	21,760
.	. .	. .	100	10	16	181	11	2	13,300	4	45	500	22,500	500	23,400	530	23,850
. .	. .	. .	50	5	. . .	. . .	4	2									
.	. .	. .	71	15	18	104	5	. .	4,982	2	46	300	13,800	299	14,000	330	15,180
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	45	270	12,150	280	12,600	300	13.500
. .	. .	. .	140	11	15	166	12	. .	. . . .	7	40	240	9,600	220	8,800	220	8,800
. .	. .	. .	.	. . .	. . .	. . .	. . .	. .	. . . .	. . .	36	240	8,640	200	7,200	260	9,360
. .	. .	. .	35	5	6	46	3	1	2,927	2	49	220	11,760	230	12,250	225	12,005
. .	. .	. .	28	8	6	42	4	2	2,767	2	34	125	5,406	170	6,936	180	7,276
. .	. .	. .	27	8	2	37	3	. .	3,710	2	36	90	4,464	110	5,184	90	4,824
.	. .	. .	20	. .	2	22	1	. .	1,473	2	30	175	5,250	185	5,550	160	4,800
1	. .	2	45	5	8	58	4	3	1,150	2	42	. .	. . . .	. . .	. . . .	225	9,450
1	.	1	38	12	8	58	. . .	. .	1,800	2	42	130	5,460	130	5,460	130	5,460
1	30	2	120	15	8	143	3	2	6,000	2	30	500	15,000	450	13,500	450	13,500
1	30	2	163	4	30	197	18	4	8,436	2	30	600	18,000	580	17,400	560	16,800
. .	. .	. .	23	4	3	30	1	1	1,038	2	42	170	7,140	180	7,560	175	7,350
. .	. .	. .	22	3	4	29	2	.	550	2	42	170	7,040	180	. .	180	
1	6	1	42	2	15	59	6	1	11,809	2	3	235	8,038	185	6,583	250	8,475
. .	. .		92	12	34	138	16	3	. . . .	3	48	230	12,148	237	12,951	247	13,523
. .	. .	. .	107	18	23	148	9	.	. . . .	2	78	160	15,225	167	15,755	173	16,207
. .	. .	. .	220	22	120	362	21	. .	13,928	2							
. .	. .	. .	. .	. .	. .	. .	. . .	. .	. . . .	5	33	275	9,075	278	9,174	270	8,910
. .	. .	. .	19	9	9	37	7	. .	755	3	30	190	5,700	195	5,850	200	6,000
. .	. .	. .	35	20	16	71	8	.	4,119	4	35	220	7,700	215	7,525	225	7,875
. .	. .	. .	238	108	67	413	50	1	. . . .	2	72	349	25,128	294	21,168	295	31,310
. .	. .		. . .	. . .	. . .	. . .	. . .	. .	. . . .	3	40	590	23,600	449	17,690	658	24,320
. .	. .	. .	. . .	. . .	. . .	. . .	. . .	. .	. . . .	2	65	519	33,735	358	23,270	483	32,395
2	40	2	50	34	25	109	16	.	5,918	3	90	300	27,000	315	28,350	320	28,800
. .	. .	. .	60	39	26	125	15	2	6,417	3	130	330	42,900	320	41,600	320	41,600
1	20	1	100	64	30	194	19	. .	9,595	2	90	330	29,700	340	30,600	350	31,500

A STATEMENT *of the Names, Power, Capacity, and Ventilation in the respective*

NAME OF COLLIERY.	VENTILATION.										
	4TH WEEK.			1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.	
	Velocity of air current per minute at inlet.	Number of cubic feet passing in per minute at inlet.	Average velocity of air current per minute per month.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current per minute at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.	Velocity of air current at or near face of heading.	Number of cubic feet per minute passing at or near face of head'g.
	29	30	31	32	33	34	35	36	37	38	39
Barclay,	...	...	...	...	...	140	6,720	150	7,200	165	7,840
Barclay,	...	...	...	...	...	165	7,540	140	6,720	100	4,800
Barclay,	...	...	...	...	...	...	...	...	...	...	...
Carbon Run,	...	...	...	90	900	89	999	99	990	89	890
Carbon Run,	...	...	...	219	2,628	189	2,268	199	2,388	179	2,148
Carbon Run,	...	...	...	...	...	...	...	...	...	...	...
Carbon Run,	...	...	...	...	...	...	...	...	...	...	...
Porter,	350	18,400	385	...	...	...	...	...	...	...	...
Bennington Shaft,	...	29,000	200	...	7,000	...	6,300	...	6,906	...	8,000
Rolling-Mill Mine,	115	10,350	106	80	4,000	85	4,250	95	4,750	125	6,250
Blast Furnace Mine,	145	12,760	135	60	5,760	64	6,144	68	6,528	70	6,720
Conemaugh Mine,	85	3,060	80	42	1,386	43	1,419	46	1,518	48	1,584
Woodvale Mine,	115	4,025	106	66	2,640	67	2,680	70	2,800	75	3,000
Ben's Creek,	...	...	...	...	...	...	...	...	...	...	...
Moshannon,	225	12,600	206	250	10,000	200	80,000	225	8,800	225	9,000
Franklin,	490	21,070	482	525	18,375	550	19,250	515	18,025	520	18,200
Penn,	100	4,578	90	100	3,850	130	4,820	140	5,194	142	5,234
Beaver Run,	...	...	207	213	6,390	203	6,090	196	5,880	...	...
Eureka,	220	15,077	205	240	6,547	230	6,314	240	6,547	245	6,663
Goss Run,	210	13,647	196	260	12,856	250	12,430	240	12,003	260	12,856
Mapleton,	310	13,810	320	380	12,960	400	13,496	430	1,493	400	13,496
Excelsior,	348	22,252	383	240	12,960	245	13,150	240	12,960	247	14,238
Ocean,	530	23,850	520	300	...	310	...	320	...	310	...
Ocean,	...	...	...	200	...	200	...	200	...	215	...
Webster,	350	16,100	322	190	7,600	200	8,000	210	8,400	220	8,800
Webster,	320	14,400	292	220	9,240	240	10,080	250	10,500	260	10,920
Sterling, No. 2,	240	9,600	220	180	8,640	170	8,160	200	9,600	170	8,160
Sterling, No. 2,	230	8,280	216	180	9,000	150	7,500	200	10,000	170	8,500
Logan,	220	11,760	223	130	4,410	140	4,725	140	4,725	135	4,567
Laurel Run,	160	6,596	158	130	4,952	170	5,712	180	5,992	170	5,712
Decatur,	85	4,248	93	90	3,968	100	4,288	90	4,288	85	3,776
Glenwood,	190	5,700	177	90	2,160	95	2,280	120	2,880	110	2,640
Sandy Lick,	250	10,500	230	...	...	...	...	200	8,400	225	9,450
Cascade,	130	5,460	130	180	4,320	180	4,320	180	4,320	180	4,320
Daguscahonda,	500	15,000	475	475	14,250	475	14,250	450	13,500	580	14,400
Robertsdale,	570	17,100	577	500	15,000	525	15,750	515	15,450	525	15,750
Fisher,	180	7,560	176	140	3,360	150	3,600	145	3,480	150	3,600
Moredale,	190	...	190	110	...	130	...	120	...	140	...
McIntyre,	266	8,868	234	147	5,476	143	5,361	153	5,652	145	5,419
McIntyre,	300	15,888	253	190	6,729	174	6,263	187	6,641	195	6,874
McIntyre,	200	18,250	175	235	8,894	217	8,015	227	8,323	240	8,729
Antrim,	...	...		...	...	...	...	...	...	...	...
Antrim,	280	9,240	275	210	5,880	200	5,600	205	5,740	215	6,020
Fall Brook,	190	5,700	194	125	3,000	130	3,120	135	3,240	125	3,000
Fall Brook,	220	7,700	220	130	3,380	135	3,570	135	3,510	130	3,380
Arnot,	366	36,352	326	232	7,424	220	7,040	200	6,400	214	6,884
Arnot,	483	19,320	547	196	6,272	174	5,728	160	5,120	150	4,800
Arnot,	519	33,735	469	769	18,456	537	12,888	769	18,456	787	18,888
Morris Run,	320	28,800	318	130	6,500	120	6,000	120	6,000	130	6,500
Morris Run,	330	42,900	325	130	5,200	130	5,200	140	5,600	130	5,200
Morris Run,	340	30,600	340	140	5,600	150	6,000	150	6,000	140	5,600

Collieries in the Third Bituminous Mine District of Pennsylvania—Continued.

VENTILATION.											
		1ST WEEK.		2D WEEK.		3D WEEK.		4TH WEEK.			
Average velocity per minute for the month.	Outlet—size of—sq. feet.	Velocity of air current per minute at outlet	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Velocity of air current per minute at outlet.	Number of cubic feet per minute passing out.	Average number of feet passing out per month.	LOCATION.
40	41	42	43	44	45	46	47	48	49	50	51
152	64	. . .	. . . .	600	38,400	650	41,600	700	41,800	41,600	Barclay, Bradford county.
135	36	. . .	. . . .	250	9,000	240	8,640	220	7,920	8,520	Barclay, Bradford county.
. . .	36	. . .	. . .	370	13,320	320	11,520	370	13,320	12,720	Barclay, Bradford county.
91	91	409	37,219	349	31,759	419	38,125	509	46,319	38,356	Carbon Run, Bradford co.
211	30	299	2,970	279	8,370	319	9,570	309	9,270	8,768	Carbon Run, Bradford co.
. . .	31	539	16,978	459	14,458	489	15,403	449	14,143	15,168	Carbon Run, Bradford co.
. .	33	199	6,567	239	7,887	229	7,557	189	6,237	6,872	Carbon Run, Bradford co.
. .	40	400	18,000	400	18,000	380	14,020	280	14,200	16,000	Porterville, Blair county.
168	352	. . .	25,300		21,600	. . .	26,700	. . .	27,300	25,975	Bennington, Blair county.
96	38	350	13,300	350	13,300	368	13,984	370	14,060	13,660	Johnstown, Cambria county.
65	61	350	21,350	355	21,655	360	21,960	362	21,084	21,777	Johnstown, Cambria county.
35	30	100	3,000	120	3,600	120	3,600	130	3,900	3,510	Johnstown, Cambria county.
69	30	125	3,750	128	3,840	132	3,960	140	4,200	3,930	Johnstown, Cambria county.
. . .	. . .	. . .	. . . .	. . .	.	. . .	. . . .	. . .	. . .	. .	Ben's Creek, Cambria county.
225	44	275	12,100	200	8,800	250	11,000	225	9,900	11,400	Sobieski, Clearfield county.
502	64	760	47,880	740	46,620	775	48,825	750	47,255	47,645	Houtzdale, Clearfield county.
139	15	700	10,325	716	10,633	730	10,841	741	11,000	10,699	Houtzdale, Clearfield county.
209	30	513	16,416	503	16,093	496	15,876	. . .	. . . .	16,000	Houtzdale, Clearfield county.
238	26	330	9,362	320	9,110	320	9,110	230	9,362	9,218	Houtzdale, Clearfield county.
252	36	360	14,011	350	13,662	355	13,836	360	14,011	13,880	Goss Run, Clearfield county.
402	48	190	10,759	220	12,141	270	14,448	210	11,664	12,252	Mapleton, Clearfield county.
283	36	640	23,040	645	23,220	642	23,112	640	23,040	23,013	Goss Run, Clearfield county.
312	61	320	19,520	300	18,300	310	18,910	320	19,120	19,062	Goss Run, Clearfield county.
209	45	210	9,450	240	10,800	230	10,350	240	10,800	10,350	Goss Run, Clearfield county.
205	26	700	18,900	720	19,440	720	19,440	740	19,980	19,410	Goss Run, Clearfield county.
242	30	580	12,400	590	17,700	610	18,300	615	18,450	17,962	Goss Run, Clearfield county.
180	30	240	9,600	220	8,880	220	8,800	240	9,600	9,120	Goss Run, Clearfield county.
180	32	240	8,640	220	7,200	260	9,360	230	8,280	9,640	Goss Run, Clearfield county.
136	30	350	11,400	400	13,200	390	12,600	390	12,609	12,450	Osceola Mills, Clearfield co.
162	28	120	4,312	180	5,992	130	4,592	120	4,312	4,802	Laurel Run, Clearfield co.
91	20	110	2,880	100	2,680	130	3,280	85	2,360	2,800	Decatur, Clearfield county.
130	30	200	6,000	225	6,750	230	6,900	230	6,900	6,637	Glenwood, Clearfield county.
212	. . .	. .	. . . .	. . .	.	225	9,450	250	10,300	10,000	Du Bois, Clearfield county.
180	24	220	5,280	220	5,280	220	5,280	220	5,280	5,280	St. Mary's, Elk county.
485	30	500	15,000	475	14,250	500	15,000	500	15,000	14,820	Daguscahonda, Elk county.
516	25	600	18,000	580	17,400	560	16,800	570	17,100	17,325	Robertsdale, Huntingdon co.
146	36	150	5,400	160	5,760	155	5,580	170	6,120	5,490	Moredale, Huntingdon co.
135	. . .	. .	. .	. . .	. . . .	. .	. . . .	. . .	. . .	. . . .	Moredale, Huntingdon co.
144	23	220	10,642	211	10,516	227	10,927	230	11,050	10,783	McIntyre, Lycoming county.
186	25	300	15,888	330	17,284	335	17,517	340	17,750	17,109	McIntyre, Lycoming county.
229	42	257	16,200	260	16,363	273	17,069	300	18,536	17,042	McIntyre, Lycoming county.
. . .	35	475	16,625	520	18,200	529	18,515	552	19,320	18,240	Antrim, Tioga county.
207	27	373	10,071	375	10,125	320	8,640	375	10,125	9,860	Antrim, Tioga county.
129	30	230	6,900	235	7,050	235	7,050	230	6,900	6,975	Fall Brook, Tioga county.
132	60	310	18,600	305	18,300	310	18,600	315	18,900	18,600	Fall Brook, Tioga county.
216	42	823	34,556	805	38,160	787	33,074	1,127	47,334	37,196	Arnot, Tioga county.
173	40	491	19,640	483	19,320	427	17,760	400	16,000	18,180	Arnot, Tioga county.
715	70	483	33,710	294	20,580	519	36,330	491	34,370	31,247	Arnot, Tioga county.
125	72	620	44,640	630	45,360	650	46,800	650	46,800	33,670	Morris Run, Tioga county.
133	66	666	43,560	650	42,900	660	42,000	660	43,560	43,280	Morris Run, Tioga county.
145	52	660	34,320	680	35,360	700	36,400	680	35,360	36,780	Morris Run, Tioga county.

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous Coal together with the remarks upon the condition of the several*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.
David Hogg, ...	40	Married, . .	. . . .	December 7,	. . . .
Michael Cassidy, . . .	60	Married, . .	10	December 19,	. . . .
George Hewitt, . . .	48	Married, . .	6	December 20,	December 20,
Lorenz Schneider, . . .	33	Married, . .	. . .	December 26,	. . . .
Hugh Crosson, ...	50	Married, . .	9	December 31,	. . . .

District of Pennsylvania, with a synopsis of the investigations, or inquisitions held, collieries, &c., in said district, for the month of December, 1878.

NATURE OF ACCIDENT.	REMARKS.
Back hurt, ...	By fall of roof; at Arnot colliery, Tioga county.
Killed, ...	By being crushed between roof and mine car while riding in the mine from his work; at Robertsdale, Huntingdon county.
Killed,*	By fall of roof; at Morris Run mines, Tioga county.
Body hurt, ...	By fall of coal; Sterling mines, Clearfield county.
Killed, ...	By fall of slate; Johnstown mines, Cambria county.

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* Inquest held, and verdict "accidental death."

LIST OF ACCIDENTS *occurring in the Mines of the Third Bituminous*

NAME.	Age.	Married or single.	Number of orphans.	Date of accident.	Date of investigation.	Name of colliery.
Thomas Moore,	...	Married,	...	January 19,	...	Eureka,
Thomas McDermott,	...	Single,	...	January 22,	...	Eureka,
John Murphy,	...	...	...	February 4,	...	Conemaugh,
James M. Patterson,	23	Single,	...	February 6,	...	Arnot,
Frank Kessler,	17	Single,	...	February 7,	February 7,	Blast Furnace Mine
Michael Murphy,	11	Single,	...	February 9,	...	Rolling-Mill Mine,
John M. McCanley,	30	Married,	...	February 11,	...	Eureka,
Charles Jones,	37	Single,	...	February 14,	...	Arnot,
James Wilson,	12	Single,	...	February 23,	...	Franklin,
John McDovald,	29	Married,	...	March 4,	...	Lloyd's,
Lewis Chevalley,	30	Single,	...	March 12,	...	Eureka,
Siprien Villeneve,	...	Single,	...	March 15,	...	Eureka,
Andrew Rewddock,	36	Married,	...	March 15,	...	McIntyre,
James Peters,	40	Married,	...	March 20,	...	Fall Brook,
William Grant,	50	Married,	...	April 3,	...	Rolling-Mill Mine,
James Smith,	52	Married,	...	April 13,	...	Eureka,
Joseph Eickersley,	40	Single,	...	April 17,	...	Penn,
Patrick Costello,	35	Married,	...	May 5,	...	Morris Run,
James Scanlon,	27	Single,	...	May 15,	May 15,	Sonman,
J. Mulloney,	...	...	...	June 4,	June 14,	Ocean,
John Rherrer,	26	Married,	...	June 8,	...	Arnot,
John Maxwell,	22	Single,	...	June 11,	...	Arnot,
Gust. Larson,	28	Single,	...	June 17,	...	McIntyre,
Daniel Thomas,	45	Married,	...	June 24,	...	Cambria Iron Co.'s,
Samuel Price,	20	Single,	...	June 27,	...	Robertsdale,
Mathias Weesel,	50	Married,	4	July 2,	July 3,	Rolling-Mill Mine,
George Smith,	52	Married,	...	July 22,	...	Sterling, No. 2,
James Mooney,	65	Married,	...	July 26,	...	Morris Run,
Thomas Lobb,	52	Married,	6	July 27,	July 27,	Ocean,
Thomas Gancy,	15	Single,	...	August 8,	...	Arnot,
James Blair,	14	Single,	...	August 8,	...	Arnot,
Samuel McClellan,	29	Single,	...	August 9,	...	Franklin,
J. H. Butters,	43	Married,	...	August 11,	...	Arnot,
James Williamson,	36	Married,	...	August 30,	...	Arnot,
Thomas Callahan,	38	Married,	3	September 2,	September 12,	Bennington Shaft,
Andrew Stiuley,	18	Single,	...	September 2,	...	Bennington Shaft,
Michael Cooney,	37	Single,	...	September 2,	...	Bennington Shaft,
Henry Sparling,	28	Married,	...	September 6,	...	Arnot,
John Latchen,	...	...	...	September —,	...	Lloyd's,
James Carrigan,	25	Married,	...	October 1,	...	Robertsdale,
David John.	31	Married,	3	October 1,	October 1,	Excelsior,
Thomas B. Davis,	35	Married,	2	October 1,	October 1,	Excelsior,
John Vaughn,	28	Married,	...	October 2,	...	Arnot,
George Pusee,	50	Married,	...	October 7,	...	Eureka,
Richard Creeber,	35	Married,	...	October 30,	...	McIntyre,
Robert Fleming, senior,	50	Married,	...	November 12,	...	Arnot,
Thomas Mark,	14	Single,	...	November —,	...	McIntyre,
Judson Coc,	14	Single,	...	November —,	...	McIntyre,
Thomas Kelley,	...	Married,	...	November 15,	...	Antrim,
William P. Chambers,	52	Married,	...	November 19,	...	Fall Brook,
John Johnston,	50	Married,	...	November 23,	...	Robertsdale,
Michael McLaughlin,	25	Single,	...	November 25,	...	Robertsdale,
Charles Husted,	25	Single,	...	November 27,	...	Arnot,
John T. Cullen,	26	Single,	...	November 30,	...	Robertsdale,
David Hogg,	41	Married,	...	December 7,	...	Arnot,
Michael Cassidy,	60	Married,	10	December 19,	December 19,	Robertsdale,
George Hewitt,	43	Married,	6	December 20,	December 20,	Morris Run,

Coal District of Pennsylvania, for the year ending December 31, 1878:

Nature of accident.	Cause of accident.	Location of colliery.
Shoulder injured,	By fall of coal,	Clearfield county.
Back injured,	By fall of coal,	Clearfield county.
Collar bone broken,	By fall of coal,	Cambria county.
Foot crushed,	By fall of roof,	Tioga county.
Killed,	By fall of stone from the roof,	Cambria county.
Leg broken,	Cause not given,	Cambria county.
Foot bruised,	By fall of rock,	Clearfield county.
Body bruised,	By falling into a shute,	Tioga county.
Body bruised,	By falling between mine cars,	Clearfield county.
Body badly cut,	By fall of slate from coal,	Cambria county.
Side bruised,	By fall of slate from roof,	Clearfield county.
Arm broken,	By fall of roof,	Clearfield county.
Left side crushed,	By getting between mine car and prop,	Lycoming county.
Face and eyes burned,	By the accidental discharge of can of powder,	Tioga county.
Body bruised,	By fall of coal,	Cambria county.
Shoulders injured,	Cause not given,	Clearfield county.
Leg bruised,	By fall of coal,	Clearfield county.
Knee bruised,	By fall of coal,	Tioga county.
Killed,	By fall of slate,	Cambria county.
Killed,	By fall of coal,	Clearfield county.
Foot bruised,	By fall of coal,	Tioga county.
Shoulder bruised,	By fall of coal,	Tioga county.
Back bruised,	By fall of rock,	Lycoming county.
Collar bone broken,	By fall of coal,	Cambria county.
Toes crushed,	By mining car,	Huntingdon county.
Killed,	By fall of coal,	Cambria county.
Collar bone broken,	By fall of coal,	Clearfield county.
Head and body bruised,	By fall of coal,	Tioga county.
Killed,	By fall of top coal,	Clearfield county.
Finger cut off,	By fall off a mine car,	Tioga county.
Hand bruised,	By fall off a mine car,	Tioga county.
Shoulder blade, collar bone, and six ribs broken, and head bruised,	By fall of coal,	Clearfield county.
Legs bruised,	By fall of roof and coal,	Tioga county.
Leg broken,	By fall of roof,	Tioga county.
Killed,	By premature blast in rock,	Blair county.
Burnt on face and legs,	By premature blast in rock,	Blair county.
Slightly cut on face,	By premature blast in rock,	Blair county.
Hips and back hurt,	By falling off mine car,	Tioga county.
Collar bone broken,	By fall of coal,	Cambria county.
Arm broken,	By fall of coal,	Huntingdon county.
Killed,	By fall of coal,	Clearfield county.
Killed,	By fall of coal,	Clearfield county.
Leg broken,	Between mine cars,	Tioga county.
Foot bruised,	Cause not given,	Clearfield county.
Body bruised,	Struck by mine car,	Lycoming county.
Collar bone broken,	By fall of coal,	Tioga county.
Arm bruised,	By being caught in wheel of mine car,	Lycoming county.
Arm bruised,	By being caught in wheel of mine car,	Lycoming county.
Collar bone broken,	By fall of coal,	Tioga county.
Leg broken and back injured,	By fall of stone from roof,	Tioga county.
Body bruised,	By fall of rock,	Huntingdon county.
Foot crushed,	By fall of rock,	Huntingdon county.
Body bruised,	By falling off mine car,	Tioga county.
Leg broken,	By fall of rock,	Huntingdon county.
Back hurt,	By fall of roof slate,	Tioga county.
Killed,	By being crushed between car and roof,	Huntingdon county.
Killed,	By fall of roof rock,	Tioga county.

BITUMINOUS COAL STATISTICS.

ALLEGHENY COUNTY.

Enterprise Mine.

O'Neil & Co.

Post office: West Elizabeth, county of Allegheny, Pa.

Mine located in Allegheny county.

Quantity of tons, and value in dollars, of annual product: 63,122 tons; $72,590 30.

Whole number of persons employed, 150—average.

Amount of capital employed in business, $55,000.

Amount paid annually for wages of employés, $47,000.

Amount paid for materials used in business, $11,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	120	. . .	$2 25	. . .	10	140	Average.
Miners on wages,	. . .	. . .	. . .	. . .	. . .	140	
Outside laborers,	10	. . .	1 75	. . .	10	140	
Inside laborers,	3	. . .	1 75	. .	10	140	
Outside mechanics,	1	. . .	2 00	. . .	10	140	
Inside mechanics,	1	. . .	2 00	. . .	10	140	
Outside mule drivers,	1	. . .	1 00	. . .	10		
Inside mule drivers,	10	. .	1 75	. .	10		
Weigh-master,	1	. . .	1 75	. . .	10	140	
Dumpers,	1	. . .	1 50	. . .	10	140	
Slate pickers,	. . .	. . .	. . .	. . .	10	140	
Mining overseers,	2	. . .	2 00	. . .	10	140	

O'NEIL CO.,
per LYNCH.

Cherry Mines.

Morris McCue, Pittsburgh, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 27,360 tons; amount of value in dollars, $25,992.

Whole number of persons employed, 65 men.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $24,000.

Amount paid for materials used in busines, $5,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	55	. . .	$2 50	$0 75	6 & 7	275	
Outside laborers, . . .	9	1	2 50	75			
Inside laborers, . . .	55						
Outside mechanics, . .	2						
Outside mule drivers,	. . .	1					
Inside mule drivers, .	4						
Weigh-master, ...	1						
Pitt boss, ...	1						

REMARKS.—We pay for freight, to Pan Handle Railroad Company, $13,750 per annum. The mines are situated in Allegheny county, Pa., at Hays' Crossing, 13½ miles from Pittsburgh, Pa. Embracing about forty-five acres of land.

MORRIS McCUE.

Belleview Coal and Salt Works.

P. Y. Hite, Hite, Allegheny county.

Mine located in Allegheny county, Hite Station, West Pennsylvania railroad.

Quantity of tons and value in dollars of annual product, 40,000 tons; value, $45,000.

Whole number of persons employed, 105.

Amount of capital employed in business, unknown.

Amount paid annually for wages of employés, about $25,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	70	6	$1\frac{3}{4}$ cent per bu.	40 to 65c			
Outside laborers, . . .	2	. .	$1 00				
Inside laborers, . . .	1	1	1 40	75			
Outside mechanics, . .	5	. .	$1 00 to 1 70				
Outside mule drivers Inside mule drivers,	7	.	1 at 1 80 6 at 1 55				
Weigh-master, ...	1	. .	17 cts. pr. 100 bu.				
Dumpers, ...	1	. .	. . . .	. . . .	. .	. .	Paid by weigh-master.
Slate pickers, ...	. .	1	. . . .	65			
Mining overseers, . .	1						
Civil engineers, . . .	1						
Trimmer on cars, . .	1	. .	. . . .	. . . .	. .	. .	Paid by weigh-master.
Salt boilers, ...	2	. .	$1 25				
Salt works boss, . . .	1	. .	1 75				
Salt works laborers, .	2	. .	1 00				

P. Y. HITE,
Per R. W. Row.

Youghiogheny Coal Works.

James O'Neil, Boston, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 1,200,000 bushels; at $3\frac{3}{4}$ and $4\frac{1}{4}$ cents, $47,000.

Whole number of persons employed, 145.

Amount of capital employed in business, $150,000 up to July 30. Mines sold to W. H. Brown.

Amount paid annually for wages of employés, $35,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	120	.	$2\frac{1}{2}$ & 3 cts. pr. bu. $1 75 2 00	$1 00	10	100	
Miners on wages, . .	120						
Outside laborers, . . .	15						
Inside laborers, . . .	9						
Outside mechanics, .	1						

REMARKS.—The original cost of my works was $240,000. I sold to W. H. Brown my railroad and stock, with my house, at $83,500; coal property to Henderson, for $42,000; retain the rest of my estate. I leased back from said parties the above works, and am now operating the same. The coal business during the last year was very dull in the after part of the season, owing to a long strike for increased wages by the miners; the price now paid being 2½ cents. I think the dullness in the coal business is chiefly caused by the price paid for mining being too high, compared to the price received for coal in lower markets.

JAMES O'NEIL,
Per J. H. O'NEIL.

Camden Coal Works.

George Lysle's sons, Pittsburgh, Allegheny county.

Mine located in Mifflin township, Allegheny county.

Quantity of tons and value in dollars of annual product, 6,000 tons; value, $60,000.

Whole number of persons employed, 151.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $50,000.

Amount paid for materials used in business, $6,000.

Miners on contract, 9 men, 10 boys; average daily wages paid men, $2; average daily wages paid boys, 75 cents; hours worked per day, 9; days in operation during year, 150; miners on wages, 110; outside laborers, 10; inside laborers, 2; outside mechanics, 2; inside mechanics, 2; inside mule drivers, 10; weigh-master, 1; dumpers, 2; mining overseer, 1; civil engineer, 1.

GEORGE LYSLE'S SONS.

Youghiogheny Shaft.

Ralph Bazaley, Pittsburgh, Allegheny county.

Mine located in Westmoreland county.

Mine not in operation.

Whole number of persons employed, 1 watchman.

Amount paid annually for wages of employés, $624.

Amount paid for materials used in business, $2,600 paid out for repairs.

RALPH BAZALEY.

Haberman Works—Lower Works—Upper Works.

Joseph Walton & Co., Pittsburgh, Allegheny county,

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 222,000 tons, valued at mines, $275,000.

Whole number of persons employed, 557.

Amount of capital employed in business, $1,005,500 in mining and shipping.

Amount paid annually for wages of employés, $175,000.

Amount paid for materials used in business, $46,919.

Miners on wages, 450 ; outside laborers, 36 ; inside laborers, 2 ; outside mechanics, 4 ; inside mechanics, 6 ; outside mule driver, 1 ; inside mule drivers, 49 ; weigh-masters, 3 ; dumpers, 3 ; mining overseers, 3—total, 557.

REMARKS.—The products of our mines are shipped exclusively by water, south and west, in which we have engaged a large number of steamboats and barges, and in connection with which, we operate a large saw-mill, which accounts for the large amount of capital invested in the business.

JOSEPH WALTON & CO.

Mr. James Nimick's Mine.

Thomas Fox, Pittsburgh, Allegheny county.

Mine located in Union township, Allegheny county.

Quantity of tons and value in dollars of annual product, 258,450 bushels, $2,584 50.

Whole number of persons employed, 29.

Amount of capital employed in business, $6,000.

Amount paid annually for wages of employés, $9,797 60.

Amount paid for materials used in business, $3,823 39.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	21	. . .	. . . .	. . .	. . .	308	
Outside laborers, . . .	7	. . .	$1 34 to $1 75	. . .	.	368	
Inside laborer, ...	1	. . .	2 16½	. . .	10	308	
Outside mule driver,	1	. . .	12 c. per trip.	. . .	. . .	308	
Dumper, ...	1	. . .	$1 75	. . .	. . .	308	

REMARKS.—We mine our coal by the bushel, and pay a cent a bushel for it. We give the amount of capital employed in business as near as possible, and materials the same. Miners on contract, we have none. It is impossible to tell the hours they work, for they go when they please, and quit when they please. We have no men at all on contract. Mechanics, we have none. We don't weigh our coal, but city brander brands our cars, and we pay by that, and sell for the same. Slate pickers, we don't employ any in our coal. We oversee the mines ourselves. Engineers, we have none.

Kenny's Works.

A. H. Kenny & Bro., Braddock, Allegheny county.

Mine located in Mifflin township, Allegheny county.

Annual product, 121,981 bushels.

Whole number of persons employed, 10.

Amount of capital employed in business, $5,000.

Amount paid annually for wages of employés, $2,939.

Amount paid for materials used in business, $500.

Miners on contract, 10 men; average daily wages paid men, $1 50; hours worked per day, various; days in operation during year, 182; outside laborers, 3; inside laborers, 2; inside mule drivers, 2.

REMARKS.—This will be our last report, as our mine is worked out, and our business closed up.

A. H. KENNY & BRO.

Fair Haven Mine.

Pittsburgh and Castle Shannon Railroad Company, Pittsburgh, county of Allegheny.

Mine located in Allegheny county.

Quantity in tons, and value in dollars, of annual product: 68,500 tons; $85,700.

Whole number of persons employed, 134.

Amount paid annually for wages of employés, $49,427 63.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	92	. . .	About $1 75	. . .	About 10 hours.	235	
Outside laborers,	7	. . .	$1 15 to 2 00				
Inside laborers,	. . .	1	. . . . . .	$1 00			
Outside mechanics,	4	. . .	1 25 to 1 75				
Inside mechanics,	2	. . .	1 25 to 1 50				
Outside mule drivers,	. . .	1	. . . . . .	1 15			
Inside mule drivers,	1	8	1 75	1 00			
Weigh-master,	2	. . .	1 75				
Dumpers,	5	. . .	1 00 to 1 25				
Mining overseers,	2	. . .	2 25				
Civil engineers,	1	. .	10 00				
Wagoners,	10	. . .	1 50				

REMARKS.—Side hill drifts, with surface drains; 4½ feet vein. Best quality of coal in this market.

W. W. MARTIN,
Sec. and Treas. Pittsburgh and Castle Shannon R. R. Co.

William Stone's Heirs Mine.

William Stone's heirs, McKeesport, county of Allegheny.

Mine located in Mifflin township, Allegheny county.

Quantity in tons, and value in dollars, of annual product: 2,000,000 tons; $100,000.

Whole number of persons employed, 200.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $100,000.

Amount paid for materials used in business, $6,000.

Miners on contract, 173; daily wages paid, $360; hours worked, 12. Outside laborers, 7; inside mechanics, 2; inside mule drivers, 13; weigh-master, 1; dumpers, 2; mining overseer, 1; civil engineer, 1.

WILLIAM STONE'S ESTATE,
per SCOTT.

Hampton Coal Mines.

John McIntyre, Pittsburgh, county of Allegheny, Pa.

Mine located in Allegheny county.

Quantity of tons, and value in dollars, of annual product; 62,884 tons; $93,331 17.

Whole number of persons employed, 138.

Amount paid annually for wages of employés, $51,017 79.

Amount paid for materials used in business, $2,370 84.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	120	. . .		. . .	. . .	200	The number of boys cannot be estimated. It is customary for miners having boys large enough, to take them into the pit whenever they desire to do so.
Outside laborers, . . .	3	2	$1 50	$0 55	10	200	
Inside laborers, . .	2	. . .	2 00	. . .	10	275	
Outside mechanics, . .	1	. . .	2 25	. . .	10	200	
Inside mule drivers, .	8	. . .	1 75	. . .	10	200	
Weigh-master, ...	1	. . .	2 00	. . .	10	200	
Dumpers, ...	2	. . .	1 00	. . .	10	200	
Mining overseers, . .	1	. . .	3 85				

REMARKS.—Working on what is known as the Pittsburgh vein, 4½ feet thick. Coal is of good quality, and the roof favorable.

JNO. McINTYRE.

Jefferson Coal Works.

Foster, Clark & Wood, McKeesport, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 862,084 bushels lump, $40,000 00.

Whole number of persons employed, 121 on an average.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $30,000.

Amount paid for materials used in business, $5,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during the year.	REMARKS.
Miners on contract,	100	. . .	$2 00	. . .	From 8 to 10 hours.	120	
Outside laborer,	1	. . .	1 75	. . .		180	
Greasers,	1	. . .	1 50	. . .		120	
Outside mule driver,	1	. . .	1 75	. . .		120	
Inside mule drivers,	10	. . .	2 25	. . .		120	
Weigh-master,	1	. . .	2 37	. . .		120	
Dumpers,	1	1	2 00	1 25		120	
Hitcher,	1	. . .	1 75	. . .		120	
Mining overseer,	1	. . .	2 75	. . .		285	
Checkman,	1	. . .	2 00	. .		120	
Roadman,	1	. . .	2 25	. . .		120	
Blacksmith,	1	. . .	2 00	. . .		250	

S. C. CLARK.

Street's Run Coal Works.

Ithamar D. Risher, Hope Church, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 31,933 tons; value, $33,210.

Whole number of persons employed, 152.

Amount of capital employed in business, $12,000.

Amount paid annually for wages of employés, $30,530.

Amount paid for materials used in business? Unable to give a definite answer to this question.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	112	6	Paid by the bushel, average $2 per day.	Same as men.	Come and go at will; some 8 and some 12 hours.	94	
Outside laborers,	20						
Inside laborers,	2						
Outside mechanic,	1						
Inside mechanic,	1						
Outside mule driver,	1	. . .				. . . .	Outside driver, 2 mules.
Inside mule drivers,	6						
Weigh-master,	1						
Dumper,	1						
Mining overseer,	1						
Civil engineer engaged from time to time, as required.							

CHARACTERISTICS OF COLLIERY.—Characteristics similar to those of other mines in this section. Know of nothing worthy of mention here. Number of hands employed, both miners and laborers, varies. The numbers given is the usual force when operating in full.

Duquesne.

Duquesne Coal Company, Pittsburgh, Allegheny county.

Mine located in Wilkins township, Allegheny county.

Quantity of tons and value in dollars of annual product, 42,059 tons; value, $42,059, at mines.

Whole number of persons employed, 129.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $37,115 34.

Amount paid for materials used in business, $1,068 36.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	90	15	2½ cts.pr.bu.	2½ cts.pr.bu.			
Outside laborers, . . .	6	. .	$1 23				
Inside laborers, . . .	2	. .	1 55				
Outside mechanics, . .	2	. .	1 62½				
Inside mule drivers, .	6	. .	1 75				
Weigh-master, . . .	1	. .	1 30				
Mining overseers, . .	2	. .	2 62½				
Engineers, ...	2	. .	2 12½				
Brakemen, ...	3	. .	1 45				

REMARKS.—The coal mining of this county still continues in a depressed condition, nothing made for stockholders this year.

ALEXANDER GORDON,
President Duquesne Coal Company.

Mansfield Coal and Coke Company's Mines.

Mansfield Coal and Coke Company, Pittsburgh, Allegheny county.

Mine located in Robinson township, Allegheny county.

Quantity of tons and value in dollars of annual product, 29,091 tons; value, $26,181.

Whole number of persons employed, 125.

Amount of capital employed in business, $250,000.

Amount paid annually for wages of employés, $22,000.

Amount paid for materials used in business, $1,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	90	. .	60 cts. pr. ton.	. . . .	10	180	
Outside laborers, . . .	25	.	$1 25	. . . .	10	180	
Inside laborers, . . .	2	. .	2 00	. . . .	10	180	
Outside mechanics, . .	2	. .	2 00	. . . .	10	180	
Outside mule driver, .	1	. .	1 60	. . . .	10	180	
Inside mule drivers, .	4	. .	1 60	. . . .	10	180	
Weigh-master, ...	1	. .	2 25	. . . .	10	180	

REMARKS.—The business in the first six months of the year was a continuation of the previous year—generally demoralized from unsettled condition of labor. The balance of the year fair business, hardly remunerative however. Causes, excessive production, onerous taxes on corporations as against individual miners, and coals mined in western States not paying corporation taxes. And so long as our Commonwealth persists in the inequality of the present system of raising revenues, it is only a question of time when the western producers of bituminous coals will be driven entirely out of the market, or abandon their incorporated privileges to enable them to compete successfully as against individual enterprise.

D. REISINGER,
Business Manager.

Robbins & Jenkins.

William Robbins & Robert Jenkins, McKeesport, Allegheny county.
Mine located in Allegheny county.
Quantity of bushels of annual product, 1,214,168.
Whole number of persons employed, 145.
Amount of capital employed in business, $60,000.
Amount paid annually for wages of employés, $34,057 20.
Amount paid for materials used in business, $8,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	115	5	About $2 50				
Outside laborers, . . .	4	. .	2 25	. . .	10		
Inside laborers, . . .	2	. .	2 25	. . .	10		
Outside mule drivers,	3	1	2 25	$1 25	10		
Inside mule drivers, .	5	3	2 25	1 25	10		
Weigh-master, ...	1	. .	2 25	. . .	10		
Dumper, ...	1	1	2 00	1 25	10		
Mining overseer, . . .	1	. .	. . . .	. . . .	. . .	About 10 mos.	
Civil engineer, ...	1						
Pumper, ...	1	. .	2 25				

REMARKS.—Mines situated seventeen miles from Pittsburgh, on Monongahela river, (in No. 2 pool,) and is at an elevation of two hundred and fifty feet above water-level. The thickness of the coal vein is six feet; we only take out four and one half feet. During the last year we have worked about eight months. We paid various prices for mining during the year.

ROBBINS & JENKINS.

Amity Coal Works.

J. C. Risher, & Co., Dravosburg, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 50,261 tons; $58,804 37.

Whole number of persons employed, 190 men, 18 boys.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $50,961, paid miners and laborers.

Amount paid for materials used in business, $6,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	140	16	65½ c. per ton.	$1 50	10	94	
Outside laborers, . . .	20	2	$1 50	1 00	10	182	
Inside laborers, . . .	2	. . .	2 00	. . .	10	182	
Outside mechanics, . .	6	. . .	1 75	. . .	10	208	
Inside mechanic, .	1	. . .	2 25	. . .	10	234	
Outside mule drivers.	3	. . .	2 25	. . .	10	94	
Inside mule drivers, .	11	. . .	. . . . .	. . .	10		
Weigh-master, ...	1	. . .	1 75	. . .	10	94	
Dumpers, ...	4	. . .	1 50	. . .	10		
Mining overseers, . .	2	. . .	2 50	. . .	10	312	

J. C. RISHER & CO.
PER C.

Wood Coal Works.

Wettengel & Gormley, Pittsburgh, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 17,769 tons; $18,000.

Amount of capital employed in business, $5,000.

Amount paid annually for wages of employés, $13,000.

Amount paid for materials used in business, $2,000.

Miners on contract, 40 men; days in operation during year, 300; inside mule drivers, 2; dumpers, 2.

Fort Pitt Mines.

The Fort Pitt Coal Company, box 314, Pittsburgh, Allegheny county.

Mine located in Collier township, Allegheny county.

Quantity of tons and value in dollars of annual product—coal, 20,000 tons: nut coal, 2,700 tons; slack, 2,800 tons; amount, $24,000.

Number of persons employed, varying from from 50 to 100 men, &c.

Amount of capital invested in business, capital stock paid in, $224,200.

Amount paid annually for wages of employés; pay-roll, $16,400; railroad freight, $6,000.

Amount paid for materials used in business; material, $1,300; State tonnage tax, $450.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	PRICE OF MINING, 1878.
							Per bu.
Miners on contract,	. .	. .	. . . .	. . . .	. . . . . .	. . .	Jan., 2.66 cts.
Miners on wages,	75	10	Per bushel,	Per bu.	No limit.	200	Feb., 2.66 cts.
Outside laborers,	4	. .	$1 25	. . . .	10	275	Mar., 2.66 cts.
Inside laborers,	4	. .	1 25	. . . .	10	275	April, 2.5 cts.
Outside mechanics,	2	. .	1 75	. . . .	10	275	May, 2.5 cts.
Inside mechanics,	. .	. .	. . . .	. . . .	. . . . . .	. . .	June, 2.5 cts.
Outside mule driver,	. .	1	. . . .	$1 00	10	205	July, 1.9 cts.
Inside mule drivers,	3	.	Per wagon, 4¼ cts.	. . .	10	250	Aug., strike.
Weigh-master,	1	. .	$50 per mo.	. . . .	10	. . .	Sept., 2.28 cts.
Dumpers,	. .	. .	. . . .	. . . .	. . . . . .	. . .	Oct., 2.28 cts.
Slate pickers,	. .	. .	. . . .	. . . .	. . . . . .	. . .	Nov., 2.28 cts.
Mining overseer,	1	. .	60 per mo.	. . . .	10	. . .	Dec., 2.28 cts.
Manager,	1	. .	100 per mo.	. . . .	10		

REMARKS.—The Fort Pitt coal mines are situated about eleven miles west of Pittsburgh, Pa., on the Pittsburgh, Cincinnati and St Louis railway.

The Pittsburgh seam, at Fort Pitt station, is about 80 feet above the railroad.

The coal is brought from the miners, and run down an inclined plane in the pit cars, to be loaded into the railroad cars.

Our principal market is in Pittsburgh, although we ship considerable to Chicago and the West, for gas companies, &c.

THE FORT PITT COAL COMPANY,
J. E. McCRIEKART, *Manager.*

Office, No. 337 Liberty street, lock box 314, Pittsburgh, Pa.

Corey & Co.

J. B. Corey, H. Lloyd, Son & Co., Braddock's and Pittsburgh, Allegheny county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 37,600 tons; $47,000.

Whole number of persons employed, 76.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $26,400.

Amount paid for materials used in business, $8,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	54	. . .	. . . .	. . .	. . .	250	
Outside laborers, . . .	10	. . .	$1 25 to 2 00	. . .	9		
Inside laborer, ...	1						
Outside mechanic, . .	1						
Outside mule driver, .	1						
Inside mule driver, .	5	. . .	1 75 to 2 00				
Weigh-master, ...	1	. . .	1 75				
Dumper, ...	1	. . .	1 50				
Checkman, ...	1	. . .	1 75				
Mining overseer, . . .	1	. . .	3 00				

REMARKS.—Vein, 4 feet 9 inches thick. Bituminous coal taken out by drifting.

COREY & CO.

Oak Hill, Nos. 3 and 4, Sandy Creek, No. 1, Plum Creek, No. 1.

New York and Cleveland Gas Coal Company.

Post office: Pittsburgh, county of Allegheny.

Mine located in Allegheny county.

Quantity of tons, and value in dollars of annual product, at mines: About 360,000 tons; value, say $400,000.

Whole number of persons employed, 616.

Amount of capital employed in business, $1,000,000.

Amount paid annually for wages of employés, $265,099 10.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	462	. . .	$2 32	. . .	10	177	
Outside laborers, . . .	85	. . .	1 56	. . .	. . .	177	
Inside laborers, . . .	6	. . .	1 35	. . .	. . .	177	
Outside mechanics, . .	11	. . .	1 87	. . .	. . .	177	
Outside mule drivers,	47	. . .	1 70	. . .	. . .	177	
Inside mule drivers,							
Weigh-masters, . . .	4	. . .	2 25	. . .	. . .	177	
Mining overseers, . .	3	. . .	2 75	. . .	. . .	177	
President, ...	7						
Treasurer, ...							
Paymaster, ...							
Clerk, ...							
Three telegraphers,							

WM. P. DEEBORNE, *Treasurer.*

Weinman's Mine.

Jacob Weinman, Wilkinsburg, county of Allegheny.

Mine located in Wilkins township, county of Allegheny.

Quantity in tons, and value in dollars of annual product: 6,840 tons: value, $7,113 60.

Whole number of persons employed, 12.

Amount of capital employed in business, $2,000.

Amount paid annually for wages of employés, $3,556 80.

Amount paid for materials used in business, $400.

Miners on contract, 10; number of boys, 1; daily wages, $2; days in operation, 290. Inside mule drivers, 1; wages, $1 50.

JACOB WEINMAN.

Jones' Works.

G. & W. Jones, West Elizabeth, county of Allegheny.

Mine located in Allegheny county.

Quantity of tons, and value in dollars of annual product: 56,240 tons; $47,000.

Whole number of persons employed, 112.

Amount of capital employed in business, $85,000.

Amount paid annually for wages of employés, $32,643.

Amount paid for materials used in business, $947.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	98	. . .	. . .	. . .	. . .	240	
Outside laborers, . .	4	. . .	$1 75	. .	10		
Outside mechanics, . .	3	. . .	2 25	. . .	10		
Inside mule drivers, .	5	. . .	1 75				
Weigh-master, ...	1	. . .	2 50	. . .	10		
Mining overseer, . .	1	. . .	3 50				

G. & W. JONES.

Wm. Neel's Mine.

William Neel, McKeesport, county of Allegheny.

Mine located in Allegheny county.

Quantity of tons, and value in dollars, of annual product: 24,120 tons; $20,000.

Whole number of persons employed, 73.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $13,000.

Amount paid for materials used in business, $1,620.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	52	. . .	. . .	. . .	. . .	190	
Outside laborers, . . .	9	. . .	$1 50				
Inside laborers, . . .	4	. . .	1 50				
Outside mechanics, . .	2	. . .	2 25				
Inside mechanic, . .	1						
Inside mule drivers, .	3	. . .	1 75				
Weigh-master, ...	1	. . .	2 25				
Mining overseer, . . .	1	. . .	3 00				

WILLIAM NEEL.

Pine Run Mine.

James Lynn & Co., Coal Valley, county of Allegheny.

Mine located in Allegheny county.

Quantity of bushels, and value in dollars of annual product: 2,000,000 bushels coal, at 3¾ cents, $75,000.

Whole number of persons employed, about 177.

Amount of capital employed in business, about $150,000.

Amount paid annually for wages of employés, about $9,700.

Amount paid for materials used in business, about $8,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	150	. . .	. . .	. . .	About 130 days.	. . .	2,000.000 bushels, at 2½ cents ℘ bushel.
Outside laborers,	8	2	$2 00	$1 50			
Inside laborer,	1	. . .	2 00	. . .			
Outside mechanics,	2	. . .	2 50	. . .			
Outside mule driver,	1	. . .	2 00	. . .			
Inside mule drivers,	7	2	2 25	1 50			
Weigh-master,	1	. . .	3 00	. . .			
Dumper,	1	. . .	2 00	. . .			
Mining overseers,	2	. . .	3 00	. . .			

SAM'L O'NEIL, *Clerk.*
For JAMES LYNN & Co.

Beck's Run and Six Mile Ferry Mines.

H. B. Hays & Brother, Pittsburgh, Allegheny county.

Mine located in Allegheny county.

Quantity of tons, and value in dollars of annual product: 146,682 tons; value, $154,017 48.

Whole number of persons employed, 537.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $126,574 65.

Amount paid for materials used in business, $25,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	427	. . .	2½ cents ℔ bus.	. . .	Average 10.	117	
Outside laborers, . . .	50	. . .	$1 75				
Inside laborers, . . .	13	. . .	1 75				
Outside mechanics, . .	5	. . .	2 00				
Outside mule drivers,	3	. . .	1 75				
Inside mule drivers, .	33	. . .	1 75				
Weigh-master, ...	2	. . .	2 50				
Dumpers, ...	2	. . .	3 00				
Mining overseer, . . .	1	. . .	3 00				
Civil engineer, ...	1	. . .	3 00				

Enterprise.

Hartley & Marshall, Banksville, Allegheny county.

Mine located in Banksville, Allegheny county.

Quantity of tons and value in dollars of annual product, 44,000 tons, run of mine; value at mines, 85.5 cents, $37,620.

Amount of capital employed in business; cannot possibly tell, say in plaint and coal lands, $60,000.

Amount paid annually for wages of employés, $32,619 43.

Amount paid for materials used in business; $750 very small, purchased very little this year.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract . .	97	10	$1 75	50 c.	10	210	
Miners on wages, . . .	70	. . .	. .	. . .	. . .	. . .	Average 2½ cts. ℔ bu. of 76 pounds.
Outside laborers, . . .	4	. . .	1 50				
Inside laborers, . . .	3	. . .	1 75				
Outside mechanic, . .	1	. . .	2 00				
Inside mule drivers, .	6	. . .	. . .	. . .	. . .	. . .	Work by contract, average about $2 50 ℔ day.
Weigh-Master, ...	1	. . .	2 00				
Dumper, ...	1	. . .	1 50				
Mining overseer, . . .	1	. . .	2 50				

REMARKS.—Our mine was idle from April 10 up to August 25, of this year. Price of coal has varied so much during the year, we report the average price.

HARTLEY & MARSHALL.

Iron City Coal Works.

Phillips & Mittenzwey, Pittsburgh, Allegheny county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 23,000 tons; $24,000.

Whole number of persons employed, 86.

Amount of capital employed in business, $80,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	80	. . .	. . . .	. . .	. . .	160	
Outside laborer, . . .	1	. . .	$1 75				
Outside mechanics . .	3	. . .	2 00				
Weigh-master, ...	1	. . .	2 00				
Mining overseer, . . .	1	. . .	$100 ℘ mo.				

PHILLIPS & MITTENZWEY.
Per GRUBB.

ARMSTRONG COUNTY.

Stewardson Furnace.

F. B. & A. Laughlin, Mahoning, Armstrong county.

Mine located in Armstrong county.

Quantity of tons and value in dollars of annual product, 16,200 tons, at $1 25 per ton—$20,250.

Whole number of persons employed, 40 men and boys.

Amount of capital employed in business, $25,000.

Amount paid annually for wages of employés, $14,000.

Amount paid for materials used in business, $800.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	14	7	43 c. ℘ ton.	43 c. ℘ ton.	8	275	
Outside laborers, . . .	4	1	$1 35	75	8	275	
Inside laborer, ...	1	. .	1 35	. . . .	8	275	
Inside mule drivers, .	. . .	7	. . . . . .	75	8	275	
Weigh-master, 1, (girl)	. . .	. .	. . . .	50	8	275	
Mining overseer, . . .	1	. .	$60 ℘ mo.	. . . .	. .	. . .	No lost time.

Characteristics of Colliery.—Our colliery is similar in its general characteristics to the most of the mines in the bituminous coal region; has been in operation some twenty or more years; has been remarkably free from accidents of all kinds, no fatal accident having ever occurred in it since it was opened.

F. B. & A. LAUGHLIN.

Fullerton Bank.

H. R. Fullerton, Parker City, Armstrong county.

Mine located in Butler county.

Quantity of tons and value in dollars of annual product, 2,600 tons; at $1 68 per ton, $4,368.

Amount of capital employed in business, $3,000.

Amount paid annually for wages of employés, $2,880.

Amount paid for materials used in business, $200.

Miners on contract, 10 men and 1 boy; monthly wages paid men, $40; monthly wages paid boy, $15; hours worked per day, 10; days in operation during year, 313. Outside laborers, 2; inside mule driver, 1; weighmaster, 1; mining overseer, 1.

Remarks.—My colliery is a small one. One man does the weighing and dumping and all machine work. The coal is mined by the ton. The weigh-master is mining boss and general overseer of all the business.

H. R. FULLERTON.

Reimerton Coal Works.

E. J. Bowen, Reimerton, Armstrong county.

Mine located in Armstrong county.

Quantity of tons and value in dollars of annual product, 6,000 tons; at 90 cents, $5,324 40.

Whole number of persons employed, 29 men.

Amount of capital employed in business, $21,000.

Amount paid annually for wages of employés, 4,500.

Amount paid for materials used in business, $2,950.

Miners on contract, 29 men; daily wages paid men, $1 25; hours worked per day, 8; days in operation during year, 312. Miners on wages, 2; inside laborers, 2; outside mechanic, 1; inside mechanic, 1; outside mule driver, 1; inside mule driver, 1; weigh-master, 1; dumper, 1; slate picker, 1; mining overseer, 1.

Characteristics of Colliery.—Our mine is a drift; two entries; thickness of coal, five feet. Our mine has only been running two months—the months of January and February. And, on account of the depression of the times, it was sold by the sheriff, and we have got it back again, and expect to commence running on Monday, December 16, 1878. This is as near as we can get at to give a report, on account of not running only the two months. As soon as we get to mining coal again, we will be glad to give you all the information that you may need. Men employed by the day are 12 out of the 29, which receive a daily wages of $1 25 per day; the balance are miners, who mine coal by the ton, at 50 cents per ton.

E. J. BOWEN.

BEAVER COUNTY.

Mansfield Cannel Mines.

I. F. Mansfield, Cannelton, Beaver county.

Mine located in Beaver county.

Quantity of tons and value in dollars of annual product, 18,000 tons; value, $31,500.

Whole number of persons employed, 60.

Amount of capital employed in business, $10,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	50	. . .	50 cts. pr. ton.	. . .	8	300	
Outside laborers,	2	. . .	$1 25				
Outside mule driver,	1	. . .	1 25				
Inside mule drivers,	3	. . .	1 25				
Weigh-master,	1	. . .	1 25				
Dumpers,	2	. . .	1 25				
Mining overseer,	1	. . .	3 00				

I. F. MANSFIELD.

Clinton Coal Works.

Clinton Coal Company, Rock Point, Beaver county, Pa.

Mine located in Lawrence county.

Quantity of tons and value in dollars of annual product, 11,639 tons; value, $15,712 65.

Whole number of persons employed, average 53 per month, from January 1 to June 30.

Amount of capital employed in business, $10,000—improvements not included.

Amount paid annually for wages of employés, $12,268.

Amount paid for materials used in business, $1,105.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	30	5	$2 23	75	10	175	
Outside laborers,	3	. . .	1 25	. . . .	10	175	
Inside laborers,	2	. . .	1 75	. . . .	10	175	
Inside mechanic,	1	. . .	2 00	. . . .	10	175	
Outside mule driver,	. . .	1	. . . .	75	10	175	
Inside mule drivers,	5	. . .	1 30	. . . .	10	175	
Weigh-master,	1	. . .	1 25	. . . .	10	175	
Dumper,	1	. . .	1 25	. . . .	10	175	
Mining overseer,	1	. . .	3 00	. . . .	10	175	

REMARKS.—This statement is for six months, from January 1, 1878, to June 30. Since that time, our works have not been in operation.

CLINTON COAL COMPANY.

BEDFORD COUNTY.

Cunard.

R. B. Wigton, Six-Mile Run, Bedford county.

Mine located in Bedford county.

Quantity of tons and value in dollars of annual product, 20,000 tons; mine only run part of the year; $12,000.

Whole number of persons employed, 45, part of the year.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, about $11,000 for time worked.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	35	. .	$1 25 to 1 50	$0 50 to 1 00	10	150	
Outside laborers, . . .	2	. . .	1 25	. . .	10		
Outside mechanics, .	2	. . .	1 33	. . .	10		
Inside mule drivers, .	3	. .	1 25	. . .	10		
Weigh-master, ...	1	. . .	1 25	. . .	10		
Dumper, ...	1	. . .	1 25	. . .	10		
Slate picker, ...	1	. . .	1 25	. . .	10		
Mining overseer, . . .	1	. . .	2 50				

R. B. WIGTON.

Harriet Lane Mine.

Sandy Run Coal Company, (Morley & Langdon,) Hopewell, county of Bedford, Pennsylvania.

Mine located in Bedford county.

Quantity of tons, and value in dollars, of annual product: 35,000 tons; value at pit mouth, $24,500.

Whole number of persons employed, 73.

Amount of capital employed in business, $36,000.

Amount paid annually for wages of employés, $19,200.

Amount paid for materials used in business, $1,320.

Miners on contract, men, 57; boys, 5; wages paid men, from $1 to $1 50; wages paid boys, 50 to 75 cents; hours worked daily, 9to 10; days in operation, 264; outside laborers, 2; inside laborers, 2; outside mule driver, 1; inside mule drivers, 4; weigh-master, 1; mining overseer, 1.

SANDY RUN COAL COMPANY,
Per RICHARD LANGDON.

BRADFORD COUNTY.

Towanda Coal Company.

Towanda Coal Company, and lessees of Barclay Coal Company's mines, Towanda, county of Bradford.

Mine located in Bradford county.

Quantity of tons, and value in dollars of annual product: 168,496.490 tons; $336,992 49.

Whole number of persons employed, 365.

Amount paid annually for wages of employés, $184,513 20.

Amount paid for materials used in business, $12,553 87.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	210	. . .	*$ 60	. . .	9	250	* Per gross ton.
Outside laborers, . . .	49	. . .	1 25	. .	10	250	
Inside laborers, . . .	35	12	1 30	$0 65	9	250	
Outside mechanics, . .	6	. . .	1 50	. .	10	250	
Outside mule drivers,	. . .	16	. .	1 00	9	250	
Inside mule drivers, .	22	. . .	1 25	. . .	9	250	
Weigh-masters, . . .	2	. . .	2 35	. . .	10	250	
Dumpers, ...	8	. . .	1 25	. . .	9	250	
Mining overseers, .	2	. . .	2 66	. . .	. . .	250	
Civil engineer, ...	1	. . .	4 50	. . .	. . .	250	
Locomotive engineer,	1	. . .	2 25	. . .	9	250	
Locomotive fireman, .	1	. . .	1 28	. . .	9	250	

J. B. JUDD, *Superintendent.*

Carbon Run.

Schraeder Coal Company, South Bethlehem, county of Northampton.

Mine located in Bradford county.

Quantity of tons, and value in dollars of annual product: Gross tons mined, 127,753.15; for value, refer you to company.

Whole number of persons employed, 198.

Amount of capital employed in business: Refer you to company.

Amount paid annually for wages of employés, $85,613 87.

Amount paid for materials used in business, $16,268 62.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	130	. . .	*$ 52	. . .	8	200 days.	* Per ton.
Miners on wages, . .	5	. . .	1 71	. . .	10		
Outside laborer, . . .	1	. . .	95	. . .	10		
Inside laborers, . . .	10	. . .	1 24	. . .	9		
Outside mechanics, . .	3	2	1 81	95	10		
Inside mechanics, . .	2	. . .	1 62	. . .	10		
Outside mule driver, .	1	2	1 38	66	9		
Inside mule drivers, .	12	12	1 17	66	8		Paid for every day in year.
Weigh-master, ...	1	. . .	1 90	. . .	10		
Dumpers, ...	4	. . .	1 29	. .	9		
Slate pickers, ...	4	1	1 14	50	9		
Mining overseers, . .	2	. . .	3 47	. .	. . .		Paid for every day in year.
Civil engineer, ...	1	. . .	5 00	. . .	. . .		
Loaders, ...	2	. .	1 38	. . .	10		
Prop sawyers, ...	3	. . .	1 38	. . .	10		

R. A. ABBOTT, *Superintendent.*

BLAIR COUNTY.

Porter Colliery, (on Miller Vein.)

Denniston, Porter & Co., Hollidaysburg, Blair county.

Mine located in Blair county.

Quantity of tons and value in dollars of annual product, 26,000 tons coal mined; value, $20,800.

Whole number of persons employed: Have now—men and boys, inside and out—85, and 21 on coke-yard.

Amount of capital employed in business, $15,000.

Amount paid annually for wages of employés, $19,000, including wages paid hands on coke-yard.

CLASSIFICATION.	Number of boys and men.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	46	30 cts. per ton.		Nine hours.		
Outside laborers, . . .	2	$1 00				
Inside laborers, . . .	6	1 25				
Outside mechanic, . .	1	1 75				
Inside mechanics, . .	2	1 25 and 1 35				
Outside mule drivers,	2	80				
Inside mule drivers, .	10	80 to 1 00				
Weigh-master, ...	1	1 60				
Dumpers, ...	2	1 00 and 1 30				
Mining overseer, . . .	1	2 50				
Trappers, cagers, and extra men.	12	50 to 1 25				

REMARKS.—Of the 26,000 tons coal mined in 1878, we used 8,000 tons in the manufacture of coke; the value of which, when coked, was $8,000.

Our miners were idle, *on a strike*, from July 12, to September 12, 1878.

In addition to the price per ton paid miners, they are paid extra for passing rolls in mines—of which this vein has many—also for headings, air-courses, and water-ways. They get paid for the coal taken out during this work and extra, according to the amount of labor required.

DENNISTON PORTER & CO.

Bennington Shaft.

Blair Iron and Coal Company, Hollidaysburg, Blair county.

Mine located in Blair county.

Quantity of tons and value in dollars of annual product, 80,302 tons.

Whole number of persons employed, 175.

Amount paid annually for wages of employés, $54,873 76.

Amount paid for materials used in business, $9,562 32.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	. .	. .	. . .	. . .	. . .	. . .	130 men and boys.
Miners on wages, . . .	. .	. .	. . .	. . .	. . .	. . .	Cutting coal at 36 c. ꝑ ton.
Outside laborers, . . .	2	3	$1 45	$0 70	10 hours.		
Inside laborers, . . .	6	3	1 35	44			
Outside mechanics, . .	2	. .	1 62				
Inside mule drivers, .	10	8	1 24	87			
Weigh-masters, . . .	2	. .	1 34				
Dumpers, ...	3	. .	1 51				
Mining overseers, . .	2	. .	3 12				
Engineers, ...	3	. .	1 65				

BLAIR IRON AND COAL COMPANY.

BUTLER COUNTY.

Burnett Bank.

A. Burnett, Hilliard, Butler county.

Mine located in Butler county.

Quantity of tons and value in dollars of annual product, 13,200 tons, at $1 per ton, $13,200.

Whole number of persons employed, about 60.

Amount of capital employed in business, $16,000.

Amount paid annually for wages of employees, about $7,500.

Amount paid for materials used in business, about $1,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	40	10	50 c. ꝑ ton.	$0 50	8	132	
Inside laborers, . . .	2	. . .	$1 40				
Inside mule drivers, .	2	. . .	. . . .	. . .	9		
Weigh-master, ...	1	. . .	. . . .	1 50	9		
Slate picker, ...	1	. . .	. . . .	1 00	9		

REMARKS.—This is a new bank, recently opened. A bituminous coal strata, 5½ feet in thickness.

A. BURNETT.

CAMBRIA COUNTY.

Cambria Coal Company.

Cambria Iron Company, Johnstown, Cambria county.

Mine located in Cambria county.

Quantity of tons and value in dollars of annual product, 197,893 gross tons; $178,103 70.

Whole number of persons employed, 397.

Amount of capital employed in business; included in total capital of Cambria Iron Company.

Amount paid annually for wages of employés, $121,000.

Amount paid for materials used in business, $8,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	225	. .	$1 25	. . . . .		12 months.	40 c. ⅌ gross ton.
Outside laborers, . . .	50	. .	78c. to 1 50				
Inside laborers, . . .	15	10	78c. to 1 50	33 to 60c.			
Outside mechanics, . .	10	. .	$1 to 1 50				
Inside mule drivers, .	6	68	80c. to 1 20	60 to 75c.			
Weigh-masters, . . .	2	. .	2 00				
Mining overseer, . . .	1	. .	4 00				

CAMBRIA IRON COMPANY,
POWELL STACKHOUSE, *Manager.*

Tunnel Hill Colliery.

Kittanning Coal Company, 328 Walnut street, Philadelphia.

Mine located in Cambria county.

Quantity of tons and value in dollars of annual product, 7,090$\frac{7}{20}$ gross tons.

Whole number of persons employed, 37.

Amount paid annually for wages of employés, $3,020 63.

Amount paid for materials used in business, $578 39.

Miners on contract, 33; number of men, 28; number of boys, 5; daily wages paid men, $1 40; daily wages paid boys, 60 cents; hours worked per day, 10; days in operation during the year, 112; outside mule drivers, 2; inside mule driver, 1; mining overseer, 1.

J. R. CAMERON,
Manager and Mining Engineer.

CENTRE COUNTY.

Mines 7 and 8 of Snow Shoe Railroad Company.

Bellefonte and Snow Shoe Railroad Company, Bellefonte, Centre county.

Mine located in Centre county.

Quantity of tons, and value in dollars of annual product: 39,047 tons 7 cwt.; value, $29,285 25.

Whole number of persons employed, 79.

Amount paid annually for wages of employes, $26,055 09.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	49	. . .	*$ 40	. . .	10 hours.	174	* Per ton.
Miners on wages, . .	2	. . .	2 00	. . .		100	
Outside laborers, . . .	12	. . .	1 00	. . .		184	
Inside laborers, . . .	2	. . .	1 50	. . .		174	
Trappers, ...	. . .	2	50	. . .		174	
Outside mechanic, . .	1	. . .	2 00	. . .		264	
Outside mule drivers,	8	. . .	1 25	. . .		174	
Inside mule drivers,							
Weigh-masters, . . .	2	. . .	2 25	. . .		181	
Dumpers, ...	2	. . .	1 00	. . .		174	
Mining overseer, . .	1	. . .	2 62	. . .		240	

DANIEL RHOADS,
General Superintendant.

CAMERON COUNTY.

Mount Hope Colliery.

Jacob Elias, Cameron, Cameron county.

Mine located in Shippen township, Cameron county.

Quantity of tons, and value in dollars of annual product: 39,217.27 tons; $49,021 59.

Whole number of persons employed, 100.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $35,000.

Amount paid for materials used in business, $5,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	65	. . .	*$ 45	. . .	†8	280 days.	* Per ton. † Average.
Outside laborers, . . .	20	. . .	1 25	. . .	10		
Inside laborer, ...	1	. . .	1 50	. . .	10		
Outside mechanic, . .	1	. . .	1 50	. . .	. .		
Outside mule driver, .	1	. . .	1 25	. . .	10		
Inside mule drivers, .	5	. . .	1 50	. . .	9		
Weigh-master, ...	1	. . .	2 00	. . .	10		
Dumpers, ...	3	. . .	1 25	. . .	10		
Slate picker, ...	1	. . .	1 00	. . .	10		
Mining overseer, . . .	1	. .	2 00	. . .	10		
Engin'r on locomotive,	1	. .	50 00	. .	10		Month.

REMARKS.—Mines are located on lands known as Canoe Run Estate, situated in Shippen township, Cameron county, about three miles from Cameron, and present drifts represent about two hundred thousand tons workable coal, and are connected with the old works of the Cameron Coal Company by tramway, two miles long, built with solid ties and thirty pound T rail. And use on same a "Porter & Bell" eight ton locomotive, and about one hundred and fifty mining cars, on which the coal is brought, and shipped over an inclined plane one thousand feet long, and elevation of five hundred feet; also, chutes at bottom, and there dumped into railroad cars. Have about two thousand five hundred feet railroad siding, connected with the Philadelphia and Erie division, Pennsylvania railroad.

The vein is known as the Mount Hope vein, and is 3½ feet solid coal, from roof slate to fire-clay bottom. The coal is free from all impurities, and is splendid gas and steam coal; it has been successfully used by gas companies, and produces eighteen to nineteen candles, 4½ cubic feet on gas per pound, and forty-two bushels of coke to the ton of two thousand pounds.

The mines are worked on pillar and breast system. The gangways, drifts, &c., are all driven above water level, affording self-drainage, and has, besides, good ventilation. The vein has a cover of about sixty feet.

The capacity of this colliery is about two hundred and fifty tons daily. The property contains several other veins of coal, one of which is a five foot vein of pure coal, has slate bottom and top, and is eighty feet below the vein now in operation. The five foot vein has not yet been worked to any extent, but produces coal similar to that mined at Reynoldsville. Very large beds of iron ore and fire-clay, of good quality, are also found on the property.

JACOB ELIAS,
Per A. ELIAS, *Supt.*

CLARION COUNTY.

Fairmount.

Fairmount Coal Company, New Bethlehem, Clarion county.

Mine located in Clarion county.

Quantity of tons of annual product, 53,273½ net tons.

Whole number of persons employed, 89—average.

Amount of capital employed in business, $200,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day—average about	Days in operation during year.	REMARKS.
Miners on contract, .	61	3	50, 45, 40 cts. pr. ton.	50 cts.	9		
Outside laborers, . . .	7	. .	$1 35 1 25 1 10	. . .	. . .	.	Varied during the year.
Inside laborers, . . .	2	. .	1 35 1 25 1 10	. . .	. . .	.	Varied during the year.
Outside mechanic, . .	1	. .	2 50 2 25	. . .	. .	.	Varied during the year.
Outside mule driver, .	1	. .	1 00 75	. . .	. . .	.	Varied during the year.
Inside mule drivers, .	10	. .	1 50 1 35 1 10	. . .	. . .	.	Varied during the year.
Weigh-master, ...	1	. .	2 00 1 80	. . .	. . .	.	Varied during the year.
Dumper, ...	1	. .	1 35 1 10	. . .	. . .	.	Varied during the year.
Slate picker, ...	1	. . .	1 10	. . . . .	. . .	. .	Varied during the year.
Mining overseer, . . .	1						

W. D. TAYLOR, *Secretary.*

Mineral Ridge Coal Company.

Thomas J. Skidmore, Fredonia, Chautauqua county, New York.

Mine located in Clarion county, Pennsylvania.

Quantity of tons and value in dollars of annual product, 5,500 tons; value, $49,646 83.

Whole number of persons employed, 120.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $33,317 02.

Amount paid for materials used in business, $3,192 49.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	93	. .	60 cts. pr. ton.		About 10.	Very nearly full.	
Outside laborers, . .	5	2	$1 00	50 cts.			
Inside laborers, . . .	1	2	1 20	50 cts.			
Outside mechanic, . .	1	. . .	2 25				
Outside mule driver, .	1	. . .	1 20				
Inside mule drivers, .	8	. . .	1 40				
Weigh-master, ...	1	. . .	2 00				
Dumper, ...	1	. . .	1 20				
Slate pickers, ...	2	. . .	1 20				
Mining overseer, . . .	1	. . .	2 00				
Civil engineer, ...	1	. . .	5 00				
Secretary and treasurer	1						
Total, ...	116	4					

F. E. COOKE,
Secretary and Treasurer M. R. C. Co.

Sligo Branch Coal Mine.

Sligo Branch Coal Company, limited, Reimersburg, Clarion county.

Mine located in Madison township, Clarion county—on Sligo Branch railroad.

Quantity of tons and value in dollars of annual product, 6,454 tons; value, $5,551 89.

Whole number of persons employed, 28.

Amount of capital employed in business, $20,000.

Amount paid annually for wages of employés, $3,960 95.

Amount paid for materials used in business, $810 63.

Miners on contract, 2; miners on wages, 19; outside laborer, 1; outside mule driver, 1; inside mule driver, 1; weigh-master, 1; dumper, 1; slate picker, 1; mining overseer, 1. Daily wages paid laborers, $1 25; wages paid miners, 45 cents per ton; hours worked per day, 10; days in operation during year, 108.

REMARKS.—Mine located on line of Sligo Branch railroad, Clarion county. Vein, four feet thick; roof, block slate; bottom, fire-clay, rolling. Mine has been in operation three and one half years. Times have been so very dull, in the last year, that we have only shipped about one fourth of the amount we did in 1877. Business seems to be getting better now, and we hope to do more in the year 1879.

SLIGO BRANCH COAL COMPANY, LIMITED.

CLEARFIELD COUNTY.

Franklin.

Kittanning Coal Company, 328 Walnut street, Philadelphia.

Mine located in Clearfield county.

Quantity of tons of annual product, 97,855 gross tons.

Whole number of persons employed, 184.

Amount paid annually for wages of employés, $63,084 92.

Amount paid for materials used in business, $8,322 07.

Miners on contract, 138; men, 141; boys, 43; daily wages paid men, $1 50; daily wages paid boys, 60 cents; hours worked per day, 10; days in operation during year, 205. Outside laborers, 7; inside laborers, 5; outside mechanics, 3; inside mechanic, 1; inside mule drivers, 20; weigh-master, 1; dumpers, 3; pumpers and water bailer, 3; mining overseer, 1; civil engineer, 1; locomotive engineer, 1.

J. M. CAMERON,
Manager and Mining Engineer.

Morrisdale.

R. B. Wigton, Morrisdale Mines, Clearfield county.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 96,350 tons mined.

Whole number of persons employed, average 130.

Amount paid annually for wages of employés, $51,830 58.

Amount paid for materials used in business, about $6,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	90	20	. . .	$0 75	10	About 240 days.	
Outside laborers,	9	. . .	$1 25	. . .	10		
Inside laborers,	1	1	1 50	75	10		
Inside mule drivers,	11	. . .	1 35	. . .	10		
Weigh-masters,	2	. . .	1 25	. . .	10		
Dumpers,	3	. . .	1 25	. . .	10		
Slate picker,	1	. . .	75	. . .	10		
Mining overseer,	1	. . .	2 00	. . .	10		

R. B. WIGTON.

Reading.

Richard J. Hughes & Co., Osceola Mills, Clearfield county.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 25,000 tons.

Whole number of persons employed, about 30.

Amount paid annually for wages of employés, about $12,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	25	2	*$ 40	. . .	. . .	200	* Per hour.
Outside mule drivers,	1	. . .	1 50				
Inside mule drivers, .	1	. . .	1 50				
Weigh-master, . . .	1		2 00				
Dumper, ...							

REMARKS.—Vein, four feet thick. Free from water. Is self draining.

RICHARD J. HUGHES & CO.

Excelsior Colliery.

Fisher Brothers & Miller, (H. G. Fisher, T. C. Fisher, R. A. Miller,) Houtzdale, Clearfield county.

Mine located in Clearfield county.

Quantity of tons, and value in dollars of annual product: 120,000 tons; value, $85,000.

Whole number of persons employed, 225.

Amount of capital employed in business, $50.

Amount paid annually for wages of employés, $75.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	195	. . .	. . .	. . .	. . .	290 days.	
Miners on wages,	. . .	4	. . .	$0 60	8		
Outside laborers,	4	. . .	. . .	. . .	. . .		
Inside laborers,	3	. . .	1 75	. . .	. . .		
Outside mechanics,	2	. . .	1 75	. . .	. . .		
Outside mule drivers,	2	. . .	1 60 to 1 75	. . .	. . .		
Inside mule drivers,	6	. . .		. . .	. . .		
Weigh-master,	1	. . .	1 75	. . .	. . .		
Dumpers,	2	. . .	1 60	. . .	. . .		
Slate picker,	1	. . .	1 60	. . .	. . .		
Mining overseer,	1	. . .	75 00	. . .	. . .	. . .	Per month.
Civil engineer,	1	. . .	6 00	. . .	. . .	. . .	When employed.

FISHER BROS. & MILLER.

Moshannon Colliery.

Moshannon Coal Company, Sobieski P. O., Clearfield county.

Mine located in Clearfield county.

Quantity of tons, and value in dollars of annual product: $28,163\frac{17}{20}$ tons, gross; value, $19,714 80.

Whole number of persons employed, 48 men and 3 boys.

Amount of capital employed in business, $52,206 70—working capital.

Amount paid annually for wages of employés, $17,357 39.

Amount paid for materials used in business, $1,806 23.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	35	. . .	$0 40	. . .	. . .	About 180 days.	Per ton.
Outside laborer,	1	. . .	1 50	. . .	. . .		
Outside mechanic,	1	. . .	1 50	. . .	. . .		
Outside mule drivers,	2	. . .	1 50	. . .	. . .		
Inside mule drivers,	4	. . .	1 50	. . .	. . .		
Weigh-master,	1	. . .	1 50	. . .	. . .		
Dumper,	1	. . .	1 50	. .	. . .		
Mining overseer,	1	. . .	2 25	. .	. . .		
Stable boss,	1	. . .	. . .	. . .	. . .		
Superintendent,	1	. . .	. . .	. . .	. . .		
Trappers,	. . .	3	. . .	$0 60	. . .		

REMARKS.—Business has not been satisfactory for the past year. Our tonnage is less, and profits much less than previous years. Prices are so little above the cost of production, and having three cents per ton tonnage tax to pay, which individual operators are exempt from, has enabled them, in some cases, to fill orders that we did not feel warranted in taking.

J. FRANK KNIGHT, *Secretary.*

Penn Mine.

Reakirt, Brother & Co., Philadelphia.

Mine located in Houtzdale, Clearfield county.

Quantity of tons, and value in dollars of annual product: 25,000 tons for 1878; value, at mines, $20,000.

Whole number of persons employed, 45.

Amount of capital employed in business, $20,000.

Amount paid for wages of employés for 1878, $17,000.

Amount paid for materials used in business, $1,000 for 1878.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	34	3	. . .	. . .	9		
Inside laborer, ...	1	1	$1 50	$0 60	9		
Outside mechanic, . .	1	. . .	1 50	. . .	9		
Outside mule driver, .	1	. . .	1 40	. . .	9		
Inside mule drivers, .	3	. . .	1 50	. . .	9		
Weigh-master, ...	1	. . .	2 00				
Mining overseer, . . .	1	. . .	2 00				
Preparing timber , . .	1						

REAKIRT, BRO. & CO.

Beaver Run Colliery.

Barnhurst, Good & Co., Philadelphia.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 36,000 tons; value, 27,000.

Number of persons employed, 60.

Amount of capital employed in business, $25,000.

Amount paid annually for wages of employés, $15,120.

Amount paid for materials used in business, $1,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	47	. . .	40c. ℔ ton,	. . .	8	100	
Outside mechanics, . .	3	1	$1 50	$1 00	8	100	
Inside mechanic, . . .	1	. . .	1 50	. . .	8	100	
Outside mule driver, .	1	. . .	1 40	. . .	8	100	
Inside mule drivers, .	4	. . .	1 40	. . .	8	100	
Weigh-master, ...	1	. . .	1 50	. . .	8	100	
Dumper, ...	1	. .	1 40	. . .	8	100	
Mining overseer, . . .	1	. . .	2 00	. . .	8	100	
Civil engineers, . . .	. . .	. . .	. . . . . .	. . .	. . .	. . .	Visit by contract.

BARNHURST, GOOD & CO.

Laurel Run.

Josiah M. Bacon, Philadelphia.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 32,500 tons; value, $24,400.

Whole number of persons employed, 45.

Amount of capital employed in business, $75,000.

Amount paid annually for wages of employés, $16,450.

Amount paid for materials used in business, $3,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	27	8	$2 58	$1 29	9	162	
Miners on wages, . . .	2	. . .	2 00	. . .	. . .	90	
Outside laborer, . . .	1	. . .	1 40	. . .	. . .	120	
Outside mechanic, . .	1	. . .	1 50	. . .	. . .	162	
Outside mule driver, .	1	. . .	2 00	. . .	. . .	162	
Inside mule drivers, .	4	. .	1 60				
Weigh-master, ...	1	. . .	1 60				
Dumper, ...	1	1	50	1 40			
Mining overseer, . . .	1	. . .	3 00	. . .	. . .	240	
Civil engineer, ...	1	. . .	6 00	. . .	. . .	10	
Superintendent, . . .	1						

JOSIAH M. BACON.

Cuba Mines.

John Ashcroft, Phillipsburg, Centre county.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 5,400 tons; value, 60 cents per ton.

Whole number of persons employed, 14.

Amount of capital employed in business, $12,000.

Amount paid annually for wages of employés, about $3,000.

Amount paid for materials used in business, $150.

Miners on contract, 10 men, 2 boys; daily wages paid men, 40 cents per ton; daily wages paid boys, $1; hours worked per day, 8; days in operation during year, 6 months; outside mule driver, 1 boy; inside mule driver, 1 boy.

JOHN ASHCROFT, *Lessee.*

Glenwood.

Campbell Brothers, Phillipsburg, Centre county.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 13,454 tons, valued at $8,072 40.

Whole number of persons employed, average number during year, 20.

Amount of capital employed in business, $15,000, not including real estate.

Amount paid annually for wages of employés, $7,150 90.

Amount paid for materials used in business, $321 50.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	16	. . .	40 c. pr. ton,	. . .	Irregular.	212	
Outside mule driver, Inside mule driver,	1	. . . . . .	$1 50				
Weigh-master, ...	1	. . .	2 00				
Dumper, ...	1	. . .	1 50				

CAMPBELL BROTHERS.

Derby Mines.

Thomas Barnes & Brother, Phillipsburg, Centre county.

Mine located in Clearfield county.

Quantity of tons and value in dollars of annual product, 8,000 tons; value, $56,000.

Whole number of persons employed, 15.

Amount of capital employed in business, $500.

Amount paid annually for wages of employés, $4,400.

Amount paid for materials used in business, $200.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	13	. . .	. . .	. . .	10	150	
Outside mule driver, .	1	. . .	$1 50	. . .	10	150	
Inside mule driver, .	1	. . .	1 50	. . .	10	150	

REMARKS.—We, Thomas Barnes & Brother, have leased the Derby mines from J. N. Casinova. The said mines are worth $50,000, and we are able to fill twenty-five railroad cars per day out of them, when wanted.

THOMAS BARNES.

ELK COUNTY.

Daguscahonda Coal Mine.

North-western Mining and Exchange Company, Daguscahonda, Elk county.

Mine located in Elk county.

Quantity of tons and value in dollars of annual product, 76,513 net tons; value, $68,861 70.

Whole number of persons employed: All classes; average, 147 persons monthly.

Amount of capital employed in business: The capital stock is $500,000, but the amount actually employed in the business, which is yet small, is not over $30,000; property not yet sufficiently developed.

Amount paid annually for wages of employés, $54,423 92.

Amount paid for materials used in business, (including tools,) $9,694 78

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	97	. . .	45 c. per ton,	. .	. . .	263	
Outside laborers,	18	4	$1 00 to $1 20	60 c.	10	263	
Inside laborer,	1	. . .	1 20	. . .	10	263	
Outside mechanics,	5	. . .	1 60	. . .	10	300	
Inside mechanic,	1	. . .	1 50	. . .	10	300	
Inside door tenders,	. . .	3	. . . .	40 c.			
Inside mule drivers,	5	. . .	1 10	. . .	10	263	
Weigh-master,	1	. . .	1 40	. . .	10	263	
Dumper,	1	. . .	1 20	. . .	10	263	
Teamster and stable-men,	2	. . .	1 20	. . .	10	300	
Mining overseer,	1	. . .	2 75	. . .	10	300	
Civil engineer,	1	. . .	$100 per mo.	. . .	10	25	
Clerk,	1	. . .	1 50	. . .	10	300	

REMARKS.—Since last report (1877) this company has abandoned all the old workings, extended their railroad track one mile, and opened up, to better advantage, the same vein (C) formerly worked. The coal is hoisted and lowered over two inclined planes, operated simultaneously by a stationary engine. No outside hauling by mules or horses. Present capacity of mine, 375 tons daily, but can be quickly increased to 600 tons. During the early portion of the year we suffered from a three weeks' strike. Have worked steady since and up to our full capacity, as above, attained in one year from commencement of new openings.

SAMUEL HINES,
Superintendent.

St. Mary's Coal Company.

St. Mary's Coal Company, Williamsport, Lycoming county.

Mine located in Elk county.

Quantity of tons and value in dollars of annual product, 95,797 tons; $109,840 94.

Whole number of persons employed, 140.

Amount of capital employed in business, $295,000.

Amount paid annually for wages of employés, $62,041 63.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	117	3	45 cts. per ton.	$0 75	Full time.	Full time.	
Outside laborers, . .	3		$1 50 and 1 35				
Inside laborers, . .							
Outside mechanics, . .	3		2 00 and 1 50				
Outside mule drivers,	5		1 35 and 1 00				
Inside mule drivers, .	3		1 12 and 1 00				
Weigh-masters, . . .	3		*35 00 each.				* Per month.
Dumpers, ...	3		1 50				
Mining overseers, . .	3		2 00 and 3 00				
Superintendents, . .	2		†266 00 both.				† Per month.

REMARKS.—Our mines are situated on the summit of the Allegheny and Susquehanna waters. Mines drain themselves.

J. B. CORYELL,
Secretary and Treasurer.

FAYETTE COUNTY.

Washington Mines.

Cochran, Strickler & Co., Broad Ford, Fayette county.

Mine located in Upper Tyrone township, Fayette county.

Quantity of tons and value in dollars of annual product, 8,796 tons of coke; value, $7,528.

Whole number of persons employed, 18.

Amount of capital employed in business, $28,000.

Amount paid annually for wages of employés, $6,676 60.

Amount paid for materials used in business, about $300.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	8	. . .	$1 45	. . . .	. . . .	266	
Outside laborers, . . .	6	. . .	1 25				
Outside mechanic, . .	1	. . .	1 50				
Outside mule driver, .	1	. . .	1 50				
Inside mule driver, .	1	. . .	1 50				
Mining overseer, . . .	1	. . .	1 50				

REMARKS.—Have thirty-five coke ovens and thirty-eight acres of coal land. We manufacture the larger portion of our coal into coke; it is used for smelting iron in blast furnaces.

COCHRAN, STRICKLER & CO.

Sterling Mines.

Brown & Cochran, Dawson, Fayette county, Pa.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 120,000 tons; value, $120,000.

Whole number of persons employed, 209.

Amount of capital employed in business, $500,000.

Amount paid annually for wages of employés, $96,000.

Amount paid for materials used in business, $12,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men—average.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	100	. . .	$1 50	. . . .	8	305	
Outside laborers,	60	. . .	1 50				
Inside laborers,	6	. . .	1 50				
Outside mechanics,	6	. . .	2 50				
Inside mechanics,	2	. . .	2 00				
Outside mule drivers,	5	. . .	1 50				
Inside mule drivers,	10	. . .	1 50				
Dumpers,	3	. . .	1 75				
Mining overseers,	3	. . .	2 25				

J. R. LAUGHREY,
Manager.

Globe Mines.

A. A. Hutchinson & Bro., Broad Ford, Fayette county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 44,000 tons of coke; value, $50,000.

Whole number of persons employed, 60.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $36,000.

Amount paid for materials used in business, $10,000.

Miners on contract, 38; outside coke drawers, 15; outside mechanic, 1;

outside mule driver, 1; inside mule drivers, 3; mining overseer, 1; superintendent, 1. Days in operation during year, full time.

Excelsior Coal Works.

Daniel Bortner, Fayette City, Fayette county, Pa.

Mine located in Fourth Pool, Fayette county.

Quantity of tons and value in dollars of annual product, 5,395 tons; value, $5,395.

Whole number of persons employed, 24.

Amount of capital employed in business, $3,000.

Amount paid annually for wages of employés, $4,259 19.

Amount paid for materials used in business, $500.

Miners on wages, 20; outside mule driver, 1; weigh-master, 1; daily wages paid men, $2; hours worked per day, 10; days in operation during year, 100.

CHARACTERISTICS OF COLLIERY.—Excelsior mine is located in pool No. 4, on Monongahela river, about five miles above lock No. 4. We mine six feet of coal; have three openings in front; use T iron rails in all main and dark entries. Ship by water only, in flats and barges. We have been idle several months during the year, on account of low water, and repairing locks, and strikes by miners.

DANIEL BORTNER.

Spring Grove Coke Works.

Cochran & Keister, Dawson, Fayette county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 34,560 tons coke.

Whole number of persons employed, 51.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $25,200.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	24	. . .	$1 75	. . .	9	300	
Outside laborers, . .	23	. . .	1 50	. . .	9		
Inside mule drivers, .	3	. . .	1 75	. . .	9		
Mining overseer, . . .	1	. . .	2 25	. . .	9		

COCHRAN & KEISTER.

Jackson Mines Company.

J. S. Cochran, superintendent, Dawson, Fayette county.

Mine located in Fayette county.

Quantity in tons and value in dollars of annual product, 30,000 tons.

Whole number of persons employed, 45.

Amount paid annually for wages of employés, $20,000.

Amount paid for materials used in business, $3,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	22	. . .	$1 75	. . .	9	300	Nearly.
Outside laborers, . . .	16	. . .	. . .	. . .	7		
Outside mechanic, . .	1	. . .	1 65	. . .	9		
Outside mule drivers,	4	. . .	1 62½	. . .	9		
Inside mule driver, .	1	. . .	1 50	. . .	9		
Mining overseer, . . .	1	. . .	2 25	. . .	9		

Have had from 4 to 5 men working at sand bank, for two or three months past.

JACKSON MINES COMPANY.

Bowman & Hogg, Empire Coal Works.

John S. Cunningham & Co., Brownsville, Fayette county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 25,008 tons, of 2,000 pounds; value at works, $17,256.

Number of persons employed, average number, about 70 men and boys.

Amount of capital employed in business, $18,000.

Amount paid annually for wages of employés, 14,000.

Amount paid for material used in business, $1,800.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men, for 100 bu.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	60	. . .	$1 75	. . .	10	120	Men, and some boys.
Outside laborers, . . .	4	. . .	1 75	. . .	10	120	Men.
Inside laborer, . . .	1	. . .	1 75	. . .	10	200	Pit boss.
Inside mule drivers, .	6	. . .	1 50	. . .	10	120	Boys and men.
Weigh-master, ...	1	. . .	2 00	. . .	10	120	Man.

Men to repair flats, barges and coal boats, paid $1 50 per day, in addition to the above number.

REMARKS.—Coal vein worked, averages from 6 to 6½ feet of merchantable coal. We have not been mining since last August, and will not mine any more this year. We are now building an air furnace, and laying a new iron track in our mines.

We ship nearly all our coal in barges and boats to Pittsburgh buyers, who tow it down the river to Cincinnati, Louisville, Memphis, and New Orleans.

JNO. S. CUNNINGHAM & CO.

Uniondale Coke Works.

Reid Brothers, (formerly T. W. Watt & Co.,) Dunbar, Fayette county.

Mine located in Fayette county.

Quantity of tons, and value in dollars, of annual product: The present owners only operated a short time, and was stopped by an accident, and will not be in operation until January, 1879.

Amount paid annually for wages of employés: Only got possession October 12, 1878, and have no accounts of the old company.

REMARKS.—76 coke ovens; coke used for furnaces. The coal is taken from a slope by machinery, and is used exclusively for coking.

REID BROS.

Rostraver Mine.

J. W. Clarke, Belle Vernon, Fayette county.

Mine located in Rostraver township, Westmoreland county.

Quantity of tons, and value in dollars of annual product: 16,457 tons, at 65 cents, $10,697 05.

Whole number of persons employed, 44.

Amount of capital employed in business, $60,000.

Amount paid annually for wages of employés, $9,000.

Amount paid for materials used in business, $3,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	40	120	$2 00	. . .	10	120 days.	
Outside laborers, . . .	4	120	1 75	. . .	10		
Inside laborer, ...	1	120	1 75	. . .	10		
Inside mule drivers, . .	5	120	1 75	. . .	10		
Weigh-master, ...	1	120	1 75	. . .	10		
Mining overseer, . . .	1	200	2 80	. . .	12		

J. W. CLARKE.

Summit Mines.

James Cochran & Co., Broad Ford, Fayette county.

Mine located in Fayette county.

Quantity of tons, and value in dollars of annual product: 45,600 tons; value, $30,000.

Whole number of persons employed, 50.

Amount paid annually for wages of employés, $27,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	24	. . .	$1 50	. . .	. . .	12 months.	
Outside laborers, . . .	20	. . .	1 50	. . .	. . .		
Outside mechanic, . .	1	. . .	2 00	. . .	. . .		
Outside mule driver, .	1	. . .	1 25	. . .	. . .		
Inside mule drivers, .	3	. . .	1 65	. . .	. . .		
Mining overseer, . . .	1	. . .	2 25	. . .	. . .		

REMARKS.—We manufacture all the coal we mine into coke.

JAS. COCHRAN & CO.

Turnbull & Hall's Colliery.

Turnbull & Hall, Fayette City, Fayette county.

Mine located in Jefferson township, Fayette county.

Quantity of tons and value in dollars of annual product, 6,000 bushels daily; value, $2 75.

Whole number of persons employed, 75.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $3,000.

Miners on contract, 70 men; miners on wages, 200 men; outside laborers, 4, at $1 75 per day; hours worked per day, 10; inside mule drivers, 4; mining overseer, 1; civil engineer, 1.

TURNBULL & HALL.

Carondulet Colliery.

Frazer & Frye, Fayette City, Fayette county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 1,459 tons; value, $11,380.

Whole number of persons employed, 59 miners and helpers, inside and outside.

Amount of capital employed in business, $25,000.

Amount paid annually for wages of employés, $9,850 62.

Amount paid for materials used in business, $100.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	50	. . .	54 c. per ton,	. . .	. . .	144	
Outside laborers,	4	. . .	$2 00	. . .	10	144	
Inside laborer,	1	. . .	2 00	. . .	10	144	
Outside mule driver,	1	. . .	2 00	. . .	10	144	
Inside mule drivers,	3	. . .	2 00	. . .	10	144	
Weigh-master,*	1	. . .	2 00	. . .	10	144	
Dumper,*	1	. . .	2 00	. . .	10	144	

* Included in outside 4.

REMARKS.—The above statement is for six months, as we were out of business half of this present year, working in the months of January, February, March, October, November, and December, only.

FRAZER & FRYE.

Pittsburgh and Connelsville Gas, Coal, and Coke Company.

Pittsburgh and Connellsville Gas, Coal, and Coke Company, Pittsburgh Allegheny county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 104,000 tons coke, amounting to $93,600.

Whole number of persons employed, 202.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $85,148 95.

Amount paid for materials used in business, $7,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	85	...	...	...	Average about 10.	In operation whole year, excepting holidays.	75 cts. per 100 bushels.
Outside laborers,	38	...	$1 25	...			
Inside laborers,	6	...	1 65	...			
Outside mechanics,	4	...	2 10	...			
Inside mechanics,	3	...	2 25	...			
Inside mule drivers,	...	6	...	75			
Weigh-masters,	2	...	1 95	...			
Dumpers,	2	...	1 65	...			
Coke drawers,	48	...	...	...			60 cents per oven for drawing coke.
Steam engineers,	2	...	2 10	...			
Mining overseers,	2	...	2 25	...			
Locomotive engineer,	1	...	2 95	...			
General superintend't,	1	...	3 33$\frac{1}{3}$	...			
Supt. of machinery,	1	...	3 33$\frac{1}{3}$	...			
Clerk,	1	...	2 00	...			

JOHN F. DRAVO,
General Manager.

Tyrone Mines.

Laughlin & Co., Pittsburgh, Allegheny county.
Mine located in Fayette county.
Quantity of tons of annual product, $55{,}740\frac{600}{2000}$.
Whole number of persons employed: Average about 53.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during the year.	REMARKS.
Miners on wages,	29	...	*	...	...	Full time, except holidays.	* Paid by wagon.
Outside laborers,	23	...	$1 00 to 1 20	...	...		
Outside mule driver,	1	...	*	...	...		
Inside mule drivers,	3	...	*	...	...		
Weigh-master,	1	...	1 70	...	...		
Mining overseer,	1	...	...	...	...		

LAUGHLIN & CO.,
B.

HUNTINGDON COUNTY.

Mooredale Mine.

Reakirt, Brother & Co., Philadelphia.

Mine located at Mooredale, Huntingdon county.

Quantity of tons, and value in dollars of annual product: 14,500 tons; value, at mines, $10,860.

Whole number of persons employed, 35 daily.

Amount of capital employed in business, $20,000.

Amount paid annually for wages of employés, $11,000.

Amount paid for materials used in business, $500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	28	3	$1 50	$0 75	8	268 days.	
Outside mechanic, . .	1	. . .	1 40	. . .	. . .		
Inside mule driver, .	1	. . .	1 40	. . .	. . .		
Weigh-master, ...	1	. . .	1 40	. . .	. . .		
Mining overseer, . . .	1	. . .	2 00	. . .	. . .		

REAKIRT, BRO. & CO.

JEFFERSON COUNTY.

Washington Mine.

Frank Williams, Reynoldsville, Jefferson county.

Mine located in Jefferson county.

Quantity of tons, and value in dollars of annual product, 11,632 tons; valued at $10,706.

Whole number of persons employed, 26.

Amount of capital employed in business, $8,000.

Amount paid annually for wages of employés, $7,396.

Amount paid for materials used in business, $1,387.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	14	. . .	. . .	. . .	10	285	
Outside laborers, . . .	5	. . .	$1 50	. . .	10	135	
Inside laborer, ...	1	. . .	1 50	. . .	10	62	
Outside mechanic, . .	1	. . .	1 75	. . .	10	115	
Outside mule driver, .	1	. . .	1 25	. . .	10	126	
Inside mule drivers, .	2	. . .	1 35	. . .	10	142	
Weigh-master, ...	1	. . .	1 50	. . .	10	285	
Mining overseer, . .	1	. . .	2 00	. . .	. . .	1 year	
Civil engineer, ...	1	. . .	7 50	. . .	10	3	
Superintendent, . . .	1	. . .	2 00	. . .	. . .	1 year	

FRANK WILLIAMS.

Pancoast Colliery.

Reynoldsville Coal Company, Pancoast, Jefferson county, Pa.

Mine located in Jefferson county.

Quantity of tons and value in dollars of annual product, 23,000 tons; value, $18,208 62.

Whole number of persons employed, average 38.

Amount of capital employed in business, $20,000.

Amount paid annually for wages of employés, $10,927.

Amount paid for materials used in business, $1,202 30.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	25	2	$1 66	$0 60	6	246	
Outside mechanic, . .	1	. . .	1 75	. . . .	6	246	
Inside mechanic, . . .	1	. . .	1 67	. .	6	246	
Outside mule driver, .	. . .	1	. . . .	1 25	6	246	
Inside mule drivers, .	. .	2	. . . .	1 50	6	246	
Weigh-master and outside boss, ...	1	. . .	2 00	. . . .	. . . .	246	
Dumpers, ...	2	. . .	1 50	. . . .	6	246	
Slate picker and car loader, ...	1	. . .	2 00	. . . .	. . . .	246	
Mining overseer, . . .	1	. . .	2 00	. . . .	. . . .	246	
Civil engineer, 1 every 6 months and helpers,	. . .	. . .	. . . .	. . . .	. . . .	8	

CHARACTERISTICS OF COLLIERY.—This colliery is in excellent condition for the shipment of large quantities of gas and steam coal; second to none in the State in the purity of coal. Total thickness of vein is from eight to nine feet, but only from five to six feet are worked, under the dividing slate—known as the "Block and Glassy bench." The coal is let down to chutes by a plane of about 450 feet long, at a grade of about 26 degrees, in from four to six cars at a time, which are held by a barrey or pusher, running on a separate track. The chutes are constructed with four lump, four nut, and four slack coal pockets, supplied with screen bars and a tripple hopper scales, of Kealer's, Cincinnati and Pittsburgh, manufacture.

REYNOLDSVILLE COAL COMPANY,
Per BAKER, *Clerk.*

Diamond Colliery.

Heim & Goodwill, Reynoldsville, Jefferson county.

Mine located in Jefferson county.

Quantity of tons and value in dollars of annual product, 14,229 tons; value, $10,974.

Whole number of persons employed, 40.

Amount of capital employed in business, $20,000.

Amount paid annually for wages of employés, $9,100.

Amount paid for materials used in business, $1,105.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	30	. .	44 cts. pr. ton.	. . . .	. . . .	225	
Outside laborers, . .	2	. .	$1 10	. . . .	10		
Outside mechanics, . .	2	.	1 50	. . . .	10		
Inside mule drivers, .	3	. .	. . . .	$1 25	10		
Weigh-master, . . .	1	. .	2 00	. . . .	10		
Dumpers, ...	2	.	1 10	. . . .	10		
Slate picker, ...	1	. .	1 10	. . . .	10		
Mining overseer, . . .	1	. .	3 00	. . . .	10		

REMARKS.—First-class gas and steam coal, free from sulphur and slate. Vein is worked 5 feet 6 inches thick, by double entries to carry air, and rooms nearly at right angles. Coal is let down plane 965 feet, with ample chute capacity.

HEIM & GOODWILL,
Per WILLIAM GIBSON.

LAWRENCE COUNTY.

Welsh Bank.

Wampum Coal Company, Wampum, Lawrence county.

Mine located in Lawrence county.

Quantity of tons and value in dollars of annual product, 17,618 tons; value, $22,022 50.

Whole number of persons employed, average about 135.

Amount of capital employed in business, about $35,000.

Amount paid annually for wages of employés, $15,856 20.

Amount paid for materials used in business, about $1,200.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	118		75 cts. pr. ton: average wages $1 50 per day.				
Outside laborers,	3		$1 25				
Inside laborers,	2		1 50				
Outside mechanic,	1		2 00				
Outside mule driver,	1		1 25				
Inside mule drivers,	5		1 35				
Weigh-master,	1		1 25				
Dumpers,	2		1 25				
Mining overseer,	1		3 00				
Superintendent,	1		4 06				

REMARKS.—We averaged about six months work during the year 1878.

WAMPUM COAL COMPANY.

Beaver Mines.

Lee & Patterson, Rock Point, Beaver county.

Mine located in Lawrence county.

Quantity of tons, and value in dollars of annual product, 38,272 tons; value, $47,840.

Whole number of persons employed, 118.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $41,077 46.

Amount paid for materials used in business, $3,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	90	. . .	$2 00	. . .	10	9 mo.	
Outside laborers, . . .	8	. . .	1 25	. . .	10		
Inside laborers, . . .	3	. . .	1 75	. . .	10		
Outside mechanics, . .	2	. . .	2 00	. .	10		
Inside mechanics, . .	2	. . .	1 75	. . .	10		
Outside mule driver, .	1	. . .	80	. . .	10		
Inside mule drivers, .	9	. . .	1 30	. . .	10		
Weigh-master, ...	1	. . .	1 25	. . .	10		
Dumpers, ...	2	. . .	1 25	. . .	10		
Mining overseer, . . .	1	. . .	2 75	. . .	10		

REMARKS.—We have met with heavy reductions in price of our coal since our last report to you. This, you can see, has been a very hard year in our trade.

LEE & PATTERSON,
Per HAMILTON, *Superintendent.*

Davidson's Bank.

W. B. Enos & Co., successor to Davidson, Green & Co., Wampum, Lawrence county.

Mine located in Lawrence county.

Quantity in tons, and value in dollars of annual product, 24,000 tons; $32,000.

Whole number of persons employed, 81.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $16,000.

Amount paid for materials used in business, $1,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	50	10	70c per ton.	. . .	8	210	
Miners on wages, . . .	10		$1 50				
Outside laborers, . . .	4	2	1 25	$0 75			
Inside laborers, . . .	2	. . .	1 50				
Outside mechanic, . .	1	. . .	1 50				
Outside mule drivers,	4	. . .	1 30				
Inside mule drivers, .	5	. . .	1 30				
Weigh-master, ...	1	. . .	1 50				
Dumper, ...	1	. . .	1 25				
Slate picker, ...	1	. . .	1 25				
Mining overseer, . . .	2	. . .	2 00				

REMARKS.—Bituminous coal, 32 inches thick, worked by drift.

W. B. ENOS & CO.

Wallace Coal Bank.

Sharples & Kincaid, New Castle, Lawrence county.

Mine located in Lawrence county.

Quantity of tons and value in dollars of annual product, 2,132 tons; $2,665.

Whole number of persons employed, 5.

Amount of capital employed in business, $1,500.

Amount paid annually for wages of employés, $1,343 16.

Amount paid for materials used in business, $50.

Miner on contract, 1 man; days in operation during year, 200; outside laborer, 1 man; days in operation during year, 120.

REMARKS.—One man has the contract for digging the coal, and he employs on average, 5 miners.

SHARPLES & KINCAID.

LYCOMING COUNTY.

McIntyre Colliery.

McIntyre Coal Company, Elmira, N. Y., and McIntyre, Lycoming county, Pa.

Mine located in Lycoming county.

Quantity of tons, 156,400.

Whole number of persons employed, 454.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	249						
Miners on wages,	10	. .	$1 62 to $2 00				
Outside laborers,	32	4	1 10	60 c. to 80 c.			
Inside laborers,	10	35	1 10 to 1 45	60 c. & 80 c.			
Outside mechanics,	13	. .	$2 30, 1 55, 2 20, 1 80, 1 58, and 55 per mo.				
Inside mechanic,	6	. .	1 62				
Outside mule drivers,	10	. .	$1 35, $1 40, and $1 45.				
Inside mule drivers,	33	. .	$1 45				
Weigh-master,	1	. .	1 58				
Dumpers,	10	.	1 15				
Slate pickers,	23	9	1 10	60 c. to 80 c.			
Mining overseers,*	2						
Civil engineer*,	1						
Foremen,*	4						
Clerk,*	1						

* Employed by the month and year.

C. J. LANGDON, *President*,
By W. D. KELLY.

McKEAN COUNTY.

Drift No. 1.

Buffalo Coal Company, Clermont, McKean county.

Mine located in McKean county.

Quantity of tons and value in dollars of annual product: Approximate product, 71,000 tons; value not shown on books of this office.

Whole number of persons employed, 120 to 170.

Amount of capital employed in business: Books of this office do not show.

Amount paid annually for wages of employés, approximate $75,000.

Amount paid for materials used in business: Books of this office do not show.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	100 to 150	5 to 15	Avg., $1 95	Work with parents.	8	About 275 days.	
Miners on wages, . .	5	. . .	1 75		8		
Outside laborers, . . .	6 to 10	. . .	9s. and 10s.		8		
Inside laborers, . .	2 to 4	. . .	9s. and 10s.		8		
Outside mechanics, .	3	. . .	16s.		8		
Inside mechan's, track-layers, ...	2 to 3	. . .	12s. and 13s.		8		
Inside mule drivers, .	6 to 10	. . .	11s. and 12s.		8		
Weigh-master, . . .	1	. . .	10s.		8		
Dumpers, ...	3 to 5	. . .	9s. and 10s.		8		
Slate pickers, ...	5 to 7	. . .	9s. and 10s.		8		
Mining overseers, . .	2						
Door boys, ...	. . . . .	5	4s.		8		

REMARKS.—Drift above water level. Drainage, natural and pumps. Ventilation, shafts with arch furnace. System, breast and pillar.

THE BUFFALO COAL COMPANY,
Per G. MACFARLANE, *Mining Engineer.*

Buttsville Coal Mines.

Stephen Bowen, trustee ; J. E. Butts, jr., agent, Alton, McKean county.

Mine located in McKean county.

Quantity of tons and value in dollars of annual product, 31,650 tons; value, $71,372 85.

Whole number of persons employed, 124.

Amount paid annually for wages of employés, $45,304 18.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	51	. . .	$2 25		8	255	
Outside laborers, . . .	10	2	1 75	88 cts.	10		
Inside laborers, . . .	4	. . .	2 06	. . .	10		
Outside mechanics, . .	5	. . .	2 00	. . .	8		
Outside mule driver, .	1	. . .	1 25	. . .	9		
Inside mule drivers, .	. . .	4		$1 25	9		
Weigh-master, ...	1	. . .	1 75	. . .	10		
Dumper, ...	1	. . .	1 50	. . .	10		
Slate pickers, ...	2	. . .	1 50	. . .	10		
Mining overseer, . . .	1	. . .	3 50				

J. E. BUTTS, Jr., *Agent.*

MERCER COUNTY.

Orangeville Mine.

Morris Coal Company, Orangeville, Trumbull county, Ohio.

Mine located in Mercer county.

Quantity of tons and value in dollars of annual product, 21,665 tons; value, $43,330.

Whole number of persons employed, 74.

Amount of capital employed in business, $40,000.

Amount paid annually for wages of employés, $24,343.

Amount paid for materials used in business, $17,433.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	38	14	. . .	. . .	8	278	
Outside laborers,	6	. . .	$1 25	. . .	10		
Inside laborers,	3	. . .	1 62½	. . .	10		
Outside mechanics,	4	. . .	2 00	. . .	10		
Outside mule driver,	. . .	1	. . .	$1 00	10		
Inside mule drivers,	1	1	1 50	1 25	10		
Weigh-master,	1	. . .	1 50	. . .	10		
Dumper,	1	. . .	1 25	. . .	10		
Mining overseer,	1	. .	3 00	. . .	10		
Engineer wiper,	. . .	1	. . .	1 00	10		
Trapper,	. . .	1	. . .	50	10		

CHARACTERISTICS OF COLLIERY.—Coal is thin and very hard, having no slips, and requiring powder to mine it, which is unusual in block coal. The basins are narrow, and run irregular, with generally rock for roofing, but sometimes mixed with slate.

MORRIS COAL COMPANY,
GEORGE FRACK, *Treasurer.*

Stoneboro'.

Mercer Iron and Coal Company, Stoneboro', Mercer county.

Mine located in Mercer county.

Quantity of tons and value in dollars of annual product, 75,035 tons of 2,000 pounds; $95,800.

Whole number of persons employed, 198.

Amount of capital employed in business, $320,700.

Amount paid annually for wages of employés, $65,763 48.

Amount paid for materials used in business, $8,500. Taxes, $4,025.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	125	15	*	. . .	. .	263	*68½ cts. per 2000 lbs.
Miners on wages, entry, &c.,	6	. . .	$1 80		10	263	
Outside laborers,	7	1	1 09	$0 45	10	263	
Inside laborers,	10	6	1 49	45	10	263	
Outside mechanics,	3	. . .	1 52	. . .	10	263	
Inside mechanics,	1	. . .	1 48	. . .	10	263	
Outside mule drivers,	. . .	. . .		. . .	. . .	. .	Haul out by steam.
Inside mule drivers,	8	. . .	1 59	. . .	10	263	
Weigh-master,	1	. . .	1 37½	. .	10	300	
Dumpers,	3	. . .	1 23	. . .	10	263	
Slate pickers,	4	. . .	1 09	. . .	10	263	
Mining overseer,	1	. . .	4 50				
Civil engineer,	1	. . .	6 00	. . .	.	15 to 20	
Other inside and inside men,	6	. . .	1 70	. . .	10 10 12	300	

CHARACTERISTICS OF COLLIERY.—Mines located on the Franklin division of Lake Shore and Michigan Southern railway.

Coal hauled out of slope 1,800 feet long, with wire rope. Natural drainage. Ventilated by furnaces. Vein, 4 feet 6 inches thick. Roof poor, but not dangerous. Dead work heavy, owing to the local drips of the vein and poor roof. Our coal is celebrated for its superiority as a steam coal. Business has been dull during the year, owing to the over-production, making competition very sharp. Mine worked little over half its *capacity*. Competition is more difficult to meet in consequence of the State tax of three cents per ton on coal mined by corporations. Our coal comes in direct competition with coal mined in Ohio, which is free from this tax. It also comes in competition with bituminous coal mined in our own State by unincorporated companies, individuals, and firms. We, therefore, think this tax very *unjust*, discriminating as it does against members of incorporated companies. If it be the settled policy of the State of Pennsylvania to tax the mineral products of the State, we think it is quite obvious that the whole burden should not be laid upon the backs of the members of incorporated companies.

ROBERT P. CANN.

Home Bank, Nos. 1 and 2.

Buhl, Westerman & Co., Sharon, Mercer county.

Mine located in Hickory township, Mercer county.

Quantity of tons, and value in dollars of annual product, $52,316\frac{100}{2000}$ tons; $86,321 40.

Amount of capital employed in business, $40,000.

Amount paid annually for wages of employés, $42,124 14.

Amount paid for materials used in business, $1,568 25.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	96	18	$1 45	$0 50	10 hours.	No. 1 shaft 290. No. 2 shaft 104.	
Outside laborers,	4	. . .	1 25	. .			
Inside laborers,	12	3	1 75	75			
Outside mechanics,	8	. . .	$4 and $2 00 4 and 1 60	. . .			
Inside mule drivers,	6	. . .	1 75	. .			
Weigh-masters,	2	. .	2 00	. . .			
Dumpers,	2	. . .	1 30	. .			
Mining overseer,	1	. . .	3 80	. . .			
Lumper,	1	. . .	1 30	. . .			

REMARKS.—Nos. 1 and 2 banks are situated about seven miles from the Erie and Pittsburgh railroad. No. 2 has been but recently opened, and only a small amount of coal has been mined. The quality of both are a fine quality of block coal.

BUHL, WESTERMAN & CO.,
D. ADAMS, *Secretary.*

Pardoe Mine—Barnes Mine.

Mercer Mining and Manufacturing Company, Pardoe, Mercer county.

Mines located: Pardoe mine in Mercer county, Barnes mine in Butler county.

Quantity of tons of annual product, 95,000 tons, (estimated,) including nut and slack.

Whole number of persons employed, 210.

Amount of capital employed in business, $95,000.

Amount paid annually for wages of employés, $82,000.

Amount paid for materials used in business, $8,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	146	20	$1 40	$0 50	9 and 10 hours.	260 days.	
Miners on wages,	3	...	1 40	...			
Outside laborers,	2	...	1 13	..			
Inside laborers,	9	...	1 30	..			
Outside mechanic,	1	...	1 30	...			
Inside mechanic,	1	.	1 45	...			
Outside mule drivers,	6	...	1 15	1 00			
Inside mule drivers,	12	...	1 40	..			
Weigh-masters,	2	..	1 75 and 2 00	..			
Dumpers,	5	...	1 13	...			
Slate pickers,	2	..	1 13	...			
Mining overseers,	2	...	2 90	...			
Mine engineer,	1	...	5 00	...			

We are working two mines. I have included them both in the report. Our production has fallen off during the year past, which is partly owing to the mild weather last winter. The trade seems to start this year on a somewhat firmer basis, and the severe weather thus far has used a large amount of surplus coal.

F. H. OLIPHANT, Jr., *Supt.*

Bethel Coal Company Mine.

Curtis & Boice, Sharon, Mercer county.

Mine located in Mercer county.

Quantity of tons, and value in dollars of annual product, 10,485 tons; value, $19,921 50.

Amount of capital employed in business, $140,000.

REMARKS.—Our mines have been closed during the greater part of the year, on account of unremunerative price of coal.

Yours, truly,
BETHEL COAL COMPANY,
B.

Pacific Slope.

Dunham, Roberts & Co., Sharon, Mercer county, Pa.

Mine located in Mercer county.

Quantity of tons and value in dollars of annual product, 18,089 tons; value, $32,560 20.

Whole number of persons employed, 46.

Amount of capital employed in business, $20,000.

Amount paid annually for wages of employés, $27,183 88.

Amount paid for materials used in business, $3,500.

Miners on contract, 27; outside laborers, 4; inside laborers, 3½; outside mechanics, 2; outside mule drivers, 1½; inside mule drivers, 3½; weigh-master, 1; dumper, 1; mining overseer, 1; total, 43 men, 3 boys. Daily wages paid men, $1 44; daily wages paid boys, 27½ cents; hours worked per day, 10; days in operation during year, 205.

DUNHAM, ROBERTS & CO.

SOMERSET COUNTY.

Cumberland and Elk Lick Coal Company.

Cumberland and Elk Lick Coal Company, Meyersdale, Somerset county.

Mine located in Somerset county.

Quantity of tons and value in dollars of annual product, 53,330 tons; value, $34,674 50.

Whole number of persons employed, 73.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $28,937.

Amount paid for materials used in business, $2,492 11.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	62	. . .	$1 50	. . . .	10	250	
Outside laborer, . . .	1	. . .	1 25	. . . .	10	250	
Inside laborer, . . .	1	. . .	1 75	. . . .	10	250	
Outside mechanic, . .	1	. . .	1 75	. . . .	10	250	
Inside mule drivers, .	. . .	4	. . . .	$1 25	10	250	
Weigh-master, ...	1	. . .	1 50	. . . .	10	250	
Dumpers, ...	2	. . .	1 25	. . . .	10	250	
Mining overseer, . . .	1	. .	4 00	. . . .	10	250	

C. M. HOULT, *Secretary.*

Berlin Colliery.

Thomas Reese, John Reese, B. D. Morgan, Thomas Price, Berlin, Somerset county, Pa.

Mine located in Somerset county.

Quantity of tons and value in dollars of annual product, 5,000 tons; value, $3,500.

Amount of capital employed in business, $1,000.

Amount paid annually for wages of employés, $2,250.

Amount paid for materials used in business, $700.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	11	. .	$1 00 & $1 25	. . .	9	200	
Miner on wages,	1	. .	1 25	. . .	9	200	
Outside laborer,	1	. .	1 00	. . .	9	200	
Inside laborer,	1	. .	1 00	. . .	9	200	
Inside mule driver,	1	. .	1 00	. . .	9	200	
Mining overseer,	1	. .	1 66	. . .	9	200	

CHARACTERISTICS OF COLLIERY.—The vein mined is four feet thick, with two small seams of slate running through—one 2 inches thick, the other $\frac{1}{4}$ inch thick—with a good slate roof; raises to the north-west about five degrees pitch; colliery is dry and safe to mine; the coal is naturally soft, quality considered good, makes good coke. The opening is at the station, or near the B. V. R. R. Co., at Berlin; it is situated south of the railroad, and its location is convenient for shipping.

THOMAS REESE & CO.

Keystone.

Keystone Coal and Manufacturing Company, Keystone Junction, Somerset county.

Mine located in Somerset county.

Quantity in tons and value in dollars of annual product, 52,000 tons; $45,600.

Whole number of persons employed, 110.

Amount paid annually for wages of employés, $36,500. Amount paid for materials used in business, $5,300. This includes expenses of five and one half miles of narrow gauge railroad.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	75	5	$1 60	$0 80	8	216	
Outside laborers, . . .	2	. . .	1 00	. . .	10	216	
Inside laborers, . . .	5	. .	1 00	. . .	10	216	
Outside mechanics, . .	2	. . .	1 50	. . .	10	216	
Inside mule drivers, .	8	. .	1 00	. . .	10	216	
Weigh-master, ...	1	. .	1 50	. . .	10	216	
Dumpers, ...	3	. . .	1 25	. . .	10	216	
Mining overseer, . . .	1	. . .	$75 per month.				
Superintendent, . . .	1	. . .	150 per month.				
Employed on narrow gauge railroad, . . .	7	. . .	300 per month.	. . .	. . .	216	

REMARKS.—The Keystone mines are located on the Cassellman river, three miles south of Myersdale. The opening is about one hundred and fifty feet above the river. Its coal is run down an inclined plane, 800 feet long. It is then taken over a narrow gauge railroad to Keystone Junction, five and one half miles, and then dumped into cars on the Pittsburgh and Connellsville railroad, about thirty-five miles from Cumberland, Maryland.

The shipments for the year have not equaled those of 1877. A very serious drawback to our trade being the three cents State tax and the discrimination made against this region by the Baltimore and Ohio railroad, now owning and operating the Connellsville railroad. Our coal comes into direct competition with the George's creek or Cumberland coal, their coal field lying about thirty-five miles from Cumberland and the Chesapeake and Ohio canal, whilst we are thirty-nine to forty miles from same point. The Legislature of Maryland do not tax this coal, and in addition compel the Baltimore and Ohio railroad to deliver it to the canal at about thirty-five cents per ton. We pay the three cents State tax and are charged eighty-five cents per ton freight to the same point, thus putting us entirely out of the market. Our coal is equally as good as the George's creek coal in every respect, and for some purposes better. It is a strong steam coal, nearly entirely free from sulphur, no clinker, and burns to a clear white ash.

In the face of the general depression in business and the extremely low price of coal, the Baltimore and Ohio railroad, last spring, raised the freight from Keystone Junction to all eastern points, four and ene half cents per ton. Unless the State Legislature take this matter in hand I can see no other course for our company than to close their mines until a competing road is built.

R. LEE FRANCE,
Superintendent.

Cumberland Mines.

J. W. Williams, Myersdale, Somerset county.

Mine located in Somerset county.

Quantity of tons and value in dollars of annual product, 14,000 tons.

Whole number of persons employed, 30.

Amount of capital employed in business, $5,000.

Inside mule drivers, 2; daily wages paid men, $1 50; hours worked per day, 10; days in operation during year, 175; dumpers, 3; daily wages paid men, $1 00; mining overseer, 1.

REMARKS.—There have been no accidents in these mines since in operation, and always have good air.

Buffalo Creek Mine.

Buffalo Creek Coal Company, Washington, D. C., No. 639 Pennsylvania avenue, East.

Mine located in Garrett, Somerset county.

Quantity of tons, and value in dollars of annual product: 184 tons; $92.

Whole number of persons employed, 13.

Amount paid annually for wages of employés, $694.

Amount paid for materials used in business, $75.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	7	. .	$1 20	. . .	. .	25	
Outside laborers, . . .	1	. . .	1 50	. . .	. . .	2	
Outside mule drivers, Inside mule drivers,	. . .	2	. . .	$0 33	. .	15	
Mining overseer, . . .	1	. . .	2 00	. .	. .	210	
Agents, ...	2	. .	3 00 1 50	. . . . .	. . . . .	30 182	

REMARKS—No coal has been shipped the past year, all work has been done opening the mines. The coal mined is outside, except a few tons consumed for *local* purposes.

SILAS L. LOOMIS,
President Buffalo Creek Coal Company.

Coleman Mine.

Samuel Adams & Phelps, Garrett, Somerset county, Pa.

Mine located in Somerset county, Pa.

Quantity of tons of annual product: About 350 tons in twelve months

Whole number of persons employed, 2

Amount of capital employed in business: About $2,000.

Amount paid annually for wages of employés: About $350.

Amount paid for materials used in business: About $300.

One miner. Pay for mining, 35 and 40 cents per ton.

REMARKS.—Bituminous coal, excellent quality.

SAMUEL ADAMS.

TIOGA COUNTY.

Fall Brook Mine.

Fall Brook Coal Company, Watkins, Schuyler county, N. Y.

Mine located in Tioga county.

Quantity of tons, and value in dollars of annual product, 74,407 net tons of 2,000 pounds, at $1 20 per ton.

Whole number of persons employed, 137.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	90	. . .	$2 25	. . .	. .	8 months.	
Outside laborers,	2	. . .	$1 25 to 1 50	.	. . .	8 months.	
Inside laborers,	. . .	8	. . . .	$0 50	. . .	9 months.	
Outside mechanics,	3	. . .	1 25 to 1 80	. . .	. . .	9 months.	
Inside mechanics,	3	. . .	1 50	. . .	. . .	9 months.	
Inside mule drivers,	13	. . .	1 00 to 1 35	. . .	. . .	9 months.	
Weigh-masters,	2	. . .	45 per month,	. .	. . .	9 months.	
Dumpers,	5	. . .	1 25	. . .	. . .	8 months.	
Slate pickers,	10	. . .	1 00 to 1 25	. . .	. . .	8 months.	
Mining overseers,	1	. . .	125 per month	. . .	. .	12 months.	

A. HARDT, *Superintendent.*

Antrim.

Fall Brook Coal Company, Watkins, Schuyler county, New York.

Mine located in Tioga county.

Quantity of tons and value in dollars of annual product, 143,230 net tons of 2,000 pounds, at $1 20.

Whole number of persons employed, 319.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	242	. . .	$2 25	. . .	. . .	9 mos.	
Miners on wages, . . .	2	. . .	1 80	. . .	. . .	1 mo.	
Outside laborers, . . .	6	. . .	$1 00 to 1 25	. . .	. . .	9 mos.	
Inside laborers, . . .	. .	7	. . . .	$0 50	. .	9 mos.	
Outside mechanics, . .	2	. . .	1 50 to 1 75	. . .	. . .	11 mos.	
Inside mechanics, . .	2	. . .	1 50	.	. . .	10 mos.	
Inside mule drivers, .	21	. . .	1 00 to 1 35	. . .	. . .	9 mos.	
Weigh-masters, . . .	2	. . .	45 per mo.	. . .	. . .	12 mos.	
Dumpers, ...	7	. . .	1 25	. .	. . .	9 mos.	
Slate pickers, ...	27	. . .	1 00 to 1 25	. . .	. . .	9 mos.	
Mining overseer, . . .	1	. . .	125 per mo.	. .	. . .	12 mos.	

A. HARDT,
Superintendent.

Morris Run.

The Morris Run Coal Mining Company, Morris Run, Tioga county.

Mine located in Tioga county, Pa.

Quantity of tons, 197,000.

Whole number of persons employed, 414.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	239	138	$2 50				
Outside laborers, . . .	43	. . .	1 30				
Inside laborers, . . .	15	. . .	2 00				
Outside mechanics, . .	7	. . .	1 80				
Inside mechanics, . .	2	. . .	1 90				
Inside mule drivers—men and boys, . . .	78	. . .	1 35				
Weigh-master, ...	3	. . .	2 00				
Dumpers, ...	19	. . .	1 25				
Slate pickers, ...	6	. . .	1 10				
Mining overseers, . .	2	. . .	3 25				
Civil engineers, . . .	This work is done by superintendent.						

REMARKS.—Our coal is semi-bituminous. The mines are entered by drifts, nearly level, and are well ventilated and drained. The top is sound and strong, and in all respects the works are quite safe for all persons employed.

PATRICK LYNCH,
President.

Blossburg Coal Company.

Blossburg Coal Company, Corning, Steuben county, New York.

Mine located in Tioga county, Pa.

Quantity of tons and value in dollars of annual product, about 196,000 tons, at $1 25=$245,000.

Whole number of persons employed, 731.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés: For mining, about $197,000; for lumber, about $21,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	355	. . .	. . .	. . .	10 hours.		
Door tenders, ...	. . .	41	. . .	$0 70			
Outside laborers, . . .	15	3	$1 30	70			
Inside laborers, . . .	13	. . .	1 40	. .			
Outside mechanics, . .	9	. .	1 80	. . .			
Outside mule drivers,	3	. . .	2 00	. . .			
Inside mule drivers, .	48	10	1 60	1 13			
Weigh-masters, . . .	2	2	1 75	70			
Dumpers, ...	25	. . .	1 30	. . .			
Slate pickers, ...	80	5	1 30	1 00			
Mining overseers, . .	2	. . .	2 00	. ..			
Civil engineer & sup't,	1	. . .	. . .	. . .			
Lumber, mills & store,	107	. . .	1 30	. . .			
Office, ...	2	. . .	3 00	. . .			

D. S. DRAKE,
Superintendent.

VENANGO COUNTY.

Maple Grove Mines.

S. P. McCalmont, Raymilton, Venango county.

Mine located in Venango county.

Quantity of tons, and value in dollars of annual product: December, 750 tons lump, 500 tons nut and stove; $1,525; eleven months, 4,312$\frac{1800}{2000}$ tons lump, and 4,000 tons nut and stove; $10,000.

Whole number of persons employed: The greatest number we have had at one time, 40 persons.

Amount of capital employed in business, $60,000.

Amount paid annually for wages of employés: Eleven months, $7,245 32; December, $1000—$8,245 32.

Amount paid for materials used in business, $1,000 nearly.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	12 to 30	2	*65c. to 70.	*	. . .	200	* Paid by the ton, the same as men.
Outside laborers, . . .	4	. . .	$1 25	. . .	9	78	
Inside laborers, . . .	2	. . .	1 50	. .	9	300	
Outside mechanic, . Inside mechanic, . .	1	. . .	2 00	. . .	10 9	66	
Outside mule drivers, Inside mule drivers,	2	. . .	1 50	. .	9	250	
Weigh-master, . . . Dumper, ...	1	. . .	1 25	. . .	10	313	
Locomotive engineer,	1	. . .	2 10	. . .	10	313	

REMARKS.—In explanation of report, would say that in the classification of employés we find it difficult to classify as to exact number of days worked by each class, as we take laborers from among the miners for outside work when we need them. Our work goes on in some shape every working day in the year, as we make repairs when not mining coal.

We have bituminous coal vein, 4 feet thick, working dry. Top safe, but requires attention. Drift opening, and railroad to connect with branch of L. S. & M. S. railroad, at Raymilton.

Very respectfully,

CHAS. A. KINNEY, *Supt.*

Cranberry Coal Mines.

Oil City Railroad and Mining Company, Oil City, Venango county.

Mine located in Cranberry township, Venango county.

Quantity of tons, and value in dollars of annual product: About 5,000 tons; value, about $10,000.

Whole number of persons employed, from 20 to 30, according to season.

Amount of capital employed in business: We operate under lease. Believe cost of six miles of railroad and opening mines ten or fifteen years ago, to be about $250,000.

Amount paid annually for wages of employés, about $7,500.

Amount paid for materials used in business, about $500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	15 to 25	. . .	*75c. and 90c.	. .	8 to 10 hours.		* Per ton.
Miners on wages,	2 to 5	. . .	$1 25	. .			
Outside mechanic,	1	. . .	1 50	. . .			
Inside mule drivers,	2	. . .	75	. . .			
Weigh-master, Dumper,	1	. . .	2 00	. . .			
Slate picker,	1	. . .	30	. . .			
Mining overseer,	1	. . .	2 00	. . .			
Civil engineer,	1	. . .	5 00	. . .		. .	When employed.

Woods' Mine.

J. W. & John B. Woods, Raymilton, Venango county.

Mine located in Mineral township, Venango county.

Quantity of tons, and value in dollars of annual product: 169 tons; value, 284 64.

Whole number of persons employed, 2.

Amount of capital employed in business, $200.

Amount paid annually for wages of employés, $142 32.

Amount paid for materials used in business, $1,100.

Miners on wages, 2; daily wages, $1 50; hours worked per day, 8; days in operation, 42¼.

REMARKS.—Our trade depends principally on country custom, and unless the roads are very good, our sales are small. We do all our mining ourselves, and all other work about the bank. Our custom is principally in the winter.

J. W. & JOHN B. WOODS.

McElhinney Mines.

Tiel & McDowell, Franklin, Venango county.

Mine located in French Creek township, Venango county.

Quantity of tons of annual product: 6,082 tons 1300 pounds up to the 1st of December. I do not think it will be over 400 tons for December.

Whole number of persons employed, average 16.

Amount paid for materials used in business, $188 for caps and posts.

Miners on contract, 16; daily wages paid, $1 75; hours worked per day, 8; days in operation during year, 138 up to first December. Miners on wages average six days per month when we work. Outside mule driver, 1; weigh-master, 1; mining overseer, 1.

Remarks.—The mines are owned by Colonel James Bleakley and the Taft estate, situated three miles from Franklin, Venango county, Pa., and operated by Tiel & McDowell. The coal is delivered from the mines by teams, and, of course, very irregular on account of the roads and weather.

Hoping this will be satisfactory,

We remain yours,

TIEL & McDOWELL.

WASHINGTON COUNTY.

Joseph Garrow Colliery.

Joseph Garrow, California, Washington county.

Mine located in Fayette county.

Quantity of tons and value in dollars of annual product, 741 bushels.

Number of persons employed, from 10 to 15.

Amount of capital employed in business, about $3,000.

Amount paid annually for wages of employés, $50.

Miners on contract, 10 men, 2 boys; daily wages paid men, $1 50 per day; daily wages paid boys, 75 cents; hours worked per day, 10; days in operation during year, 300; miners on wages, 1; outside laborers, 1; inside laborers, 1; outside mule driver, 1; inside mule driver, 1; weigh-master, 1; dumper, 1.

JOSEPH GARROW.

Laurel Hill Mines.

W. P. Rend & Co., McDonald, Washington county.

Mine located in Allegheny county.

Quantity of tons and value in dollars of annual product, 34,859 tons coal; $35,000.

Whole number of persons employed, 95.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $30,000.

Amount paid for materials used in business, $1,200.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	70	. . .	. . . .	. . .	. . .	203	
Outside laborers, . .	7	. . .	$1 50	. . .	10		
Inside laborers. . . .	2	. . .	1 50	. . .	10		
Inside mechanics, . .	2	. . .	1 75	. . .	10		
Outside mule drivers,	2	. . .	$2 and 1 50	. . .	10		
Inside mule drivers, .	7	. . .	1 50	. . .	10		
Weigh-master, ...	1	. . .	2 00	. . .	10		
Dumper, ...	1	. . .	1 25	. . .	10		
Mining overseer. . . .	1	. . .	2 50	. . .	10		
Clerk, 1 : superin'nt 1,	2						

HUGH KNOX, *Manager*,
Per WILSON.

Robbins' Block Coal Mines.

T. Burr Robbins, Midway, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 66,036 tons; value, $59,236 33.

Whole number of persons employed, 127.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $50,238 62.

Amount paid for materials used in business, $4,935 46.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	100	. . .	$1 50	. . .	10	¾ of working days.	
Outside laborers, . . .	7	. . .	1 40	. . .	10		
Inside laborers, . . .	2	. . .	1 25	. . .	12		
Outside mechanic. . .	2	. . .	2 00	. .	10		
Inside mechanics,	2	. . .	1 75	. . .	10		
Outside mule drivers,	2	. . .	1 50	. .	10		
Inside mule drivers, .	7	2	1 50	$1 00	10		
Weigh-master, ...	1	. . .	2 25	. .	10		
Dumper, ...	1	. . .	1 40	. . .	10		
Mining overseer, . . .	1	. . .	3 00	. . .	10		

REMARKS.—Our capacity is nearly double our production this year.

T. BURR ROBBINS.

Walnut Hill.

Robbins & Arnot, as Pittsburgh and Walnut Hill Coal Company, Midway, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 21,400 tons lump, 3,942 tons nut, 746 tons coke; $21,695.

Whole number of persons employed, 100.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $21,920 65.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages,	70	. . .	$1 50	. . .	10	153¼ days.	
Outside laborers,	7	1	1 40	$0 75	10		
Inside laborers,	2	5	1 50	50	10		
Outside mechanics,	2	. . .	. . .	2 25	10		
Inside mechanics,	2	. . .	. . .	1 75	10		
Inside mule drivers,	5	2	1 50	1 00	10		
Weigh-master,	1	. . .	. . .	2 00	10		
Mining overseer,	1	. . .	. . .	2 50	10		

REMARKS.—Our capacity will permit of a production amounting to one hundred thousand tons per year. The ruling prices, owing to competition of sinking concerns, were so low as to render it unsafe to do much business.

T. BURR ROBBINS.
Manager.

Shire Oaks Coal Works.

Blackburn & Mort, Coal Bluff, Washington county.

Mine located in Union township, Washington county.

Quantity of tons and value in dollars of annual product, 546,792 bushels; $20,105 14.

Whole number of persons employed, 50 men and 6 boys, on an average.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	40	. . .	$2 00	. . .	. . .	168	
Outside laborers, . . .	2	. . .	2 00	. . .	. .	200	
Outside mechanics, . .	2	. . .	2 00	. . .	. . .	200	
Inside mule drivers, .	4	. . .	1 75	. . .	. . .	168	
Weigh-master, ...	1	. . .	2 00	. .	. . .	200	
Dumper, ...	1	. . .	1 75	. . .	. . .	168	
Mining overseer, . . .	1	. . .	2 50	. . .	. . .	200	

REMARKS.—The capacity of our works is far above this statement, but the market for our coal has not justified us to make any exertion to do a fair business.

BLACKBURN & MORT.

Midway Block Coal Mines.

Jonah Taylor & R. M. Ulp, Jonah Taylor was manager, Midway, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 9,600 tons; in value, $9,500 to July 26, 1878.

Whole number of persons employed, about 80.

Amount of capital employed in business: No way of finding out, as there has been no balance sheet made for four years past.

Amount paid annually for wages of employés: For six months, from January 1, 1878, there was $11,703 80 paid.

Amount paid for materials used in business: Cannot find out, as the books of company were not kept proper.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	60						
Miners on wages,	60	. . .	. . .	. .	10	77	
Outside laborers,	. . .	. . .	$1 35	. . .	10		
Inside laborers,	. . .	. . .	1 50	. . .	10		
Inside mechanics,	. . .	. . .	1 75	. . .	10		
Outside mule drivers,	. . .	1	. . .	$1 00	10		
Inside mule drivers,	. .	5	. . .	1 25	10		
Weigh-masters,	2	. . .	1 40	. . .	10		
Dumpers,	2	. . .	1 35	. . .	10		
Mining overseers,	2	. . .	3 00	. .	10		
General manager,	1	. . .	10 00				

CHARACTERISTICS OF COLLIERY.—The Midway Block coal mine is a very nice quality of coal, similar to the Pittsburgh coal, but mines out larger and stands handling better. The coal mined is shipped mostly to Chicago by rail; some portion of it is sent to the lake, as it compares favorably with the block coal of Mahoning and Shenango valley, in size.

These mines were owned by Taylor and Ulp, but owing to the depression in trade and mismanagement combined, they could not meet their liabilities. The mine is now leased to G. W. Crawford, who is operating the same.

MIDWAY BLOCK COAL COMPANY.
Per ULP.

Enterprise Coal Works.

V. Harding, Washington, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 9,000 tons; $1 30 per ton.

Whole number of persons employed, 23 average number of men.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $6,300.

Amount paid for materials used in business, $2,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	15	. . .	$1 00	. . .	8	200	
Outside laborers, . . .	2	. . .	1 25	. . .	10	200	
Outside mechanic, . .	1	. . .	1 50	. . .	10		
Inside mule drivers, .	2	. . .	1 25	. . .	8	200	
Weigh-master, ...	1	. . .	1 25	. . .	8	200	
Dumper, ...	1	. . .	1 00	. . .	8		
Mining overseer, . . .	1	. . .	2 00	. . .	10	300	
Superintendent, . . .	1	. . .	4 00	. . .	10	300	
Engineer, ...	1	. . .	2 00	. . .	10	365	

CHARACTERISTICS OF COLLIERY.—Our coal is bituminous, good gas coal, and makes good coke. It is the equal for gas purposes to the best Youghiogheny. The thickness of the vein is 4 feet 9 inches, and is reached by a shaft 150 feet in depth. Our working plan is a main entry, crossed every 300 feet by cross entries. From these cross entries our rooms run. The rooms are 30 feet apart, and 9 feet of solid coal is left between every two rooms. Our hoisting apparatus consists of a thirty horse power engine and two seven eighth inch steel wire ropes, attached to cages, in which the cars are placed.

V. HARDING.

Little Alps Mines.

Crowthers, Musgrave & Co., California, Washington county.

Mine located in Fayette county.

Quantity of tons, and value in dollars of annual product, 1,100,000 bushels, worth about 3 cents at tipple.

Whole number of persons employed, about 60 men and 18 boys.

Amount of capital employed in business, $15,000.

Amount paid annually for wages of employés, $30,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on wages, . . .	60	18	2c. ℔ bu.	*	10	219	*Hired by men.
Outside laborers, . . .	2	1	$2 50	$0 60	10	300	
Inside laborer, ...	1	. . .	2 75	. . .	10	300	
Outside mule driver, .	1	. . .	2 00	. . .	10	230	
Inside mule drivers, .	3	. . .	1 50	. .	10	220	
Weigh-master, ...	1	. . .	2 50	. . .	10	219	

CROWTHERS, MUSGRAVE & CO.

Stockdale's.

Richard Stockdale, Monongahela City, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 300,000 tons; $21,000.

Whole number of persons employed, 70.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $15,000.

Amount paid for materials used in business, $2,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, .	62	. . .	2½c. ℔ bu.	. . .	8	190	
Outside laborers, . . .	3	. . .	$2 00	. . .	8		
Inside mule drivers, .	3	. . .	2 00	. . .	8		
Weigh-master, ...	1	. . .	2 00	. . .	8		
Mining overseer, . . .	1	. . .	2 50	. . .	8		

Remarks.—The price paid miners varies. The price at the present time is 2½ cents per bushel, which is about the average of last year's work.

We have not any regular hours for working; I think 8 hours the average. I have made this estimate from last year's work.

Knob Coal Works.

Knob Coal Company, (coöperative,) West Brownsville, Washington county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, about 8,750 ton, at 73 cents per ton—$6,387 50.

Whole number of persons employed. The least number in one month, 25; greatest number 43.

Amount of capital employed in business, about $6,000.

Amount paid annually for wages of employés, about $7,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during the year.	REMARKS.
Miners on contract,	26	9	. . .	. . .	10	205	
Outside laborers,	3	.	$1 75				
Inside laborer,	. . .	1	. . .	$0 50			
Outside mechanics,	2						
Inside mule drivers,	3	. . .	*				* By contract.
Weigh-master,	1	. . .	1 75				
Mining overseer,	1						

REMARKS.—The vein of coal is 8 feet 4 inches thick, 3 feet of which is not worked or mined; that portion which is mined, is 5 feet 4 inches thick.

The present company began to operate the mine February 19, of this year.

The mine is operated by a slope, ventilated by a shaft and steam exhaust from pump. The coal is shipped by river.

The mode of working the colliery, is by headings and rooms, no pillars being drawn.

GEORGE TAYLOR, *Secretary.*

J. S. Neel's Colliery.

J. S. Neel, Pittsburgh, Allegheny county.

Mine located in Washington county.

Quantity of tons and value in dollars of annual product, 72,000 tons; $62,000.

Whole number of persons employed, 96.

Amount of capital employed in business, $46,000.

Amount paid annually for wages of employés, $36,700.

Amount paid for materials used in business, $1,060.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	74						
Outside laborers, . . .	5	. . .	$1 50	. . .	10	220	
Inside laborers, . .	2	. . .	1 50				
Outside mechanics, . .	4	. . .	2 25				
Inside mechanics, . .	3	. .	2 25				
Inside mule drivers, .	4	. . .	1 75				
Weigh-master, ...	1	.	2 50				
Dumpers, ...	2	. . .	1 75				
Mining overseer, . . .	1	. . .	4 00				

J. S. NEEL.

WESTMORELAND COUNTY.

Saltsburg Coal Company.

The Saltsburg Coal Company, Saltsburg, Indiana county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 53,944 tons; value, $50,246 80.

Whole number of persons employed, 71.

Amount of capital employed in business. Act of incorporation, capital, $200,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . . .	50	. . .	45c. ⅌ ton.		10 hours for laborers.	All the year.	
Outside laborers, . . .	4	4	$1 50	$1 00			
Inside laborers, . . .	3	. . .	1 75				
Outside mechanics, . .	1	. . .	3 00				
Outside mule driver, .	4	. . .	1 75				
Inside mule drivers, .							
Weigh-masters, . . .	1	. . .	2 00				
Dumpers, ...	2	. . .	1 75				
Slate picker, ...	1	. . .	1 00				
Mining overseer, . . .	1	. . .	. . . . . .				

REMARKS.—I am not able to fill some of the blanks, having no records to make up the information from, being in charge of the company's interest as superintendent, since October, 1878, only.

The daily wages of miners since I am in charge, will average $2 25 per day, product being 4½ to 5 tons, at 45 cents per ton.

D. S. ROBINSON,
Superintendent.

Hodgson.

Lynch & Robinson, Webster, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 18,000 tons; value, $17,300.

Whole number of persons employed, about 75.

Amount paid annually for wages of employés, $14,000.

Amount paid for materials used in business, $1,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	60						
Outside laborers,	2	2	$2 00	$1 00	10	100	
Inside laborers,	1	. . .	2 00	. . .	10		
Outside mule driver,	1	. . .	1 75	. . .	8		
Inside mule drivers,	5	. . .	1 75	. . .	8		
Weigh-master,	1	. . .	2 00	. .	10		
Mining overseer,	1	. . .	2 25				

REMARKS.—Owing to low water and miners striking, the mine was in operation about 100 days only, during the year 1878. The mine is owned by William Hodgson, and operated by Lynch & Robinson, under a lease.

LYNCH & ROBINSON.

Penn Coal Run, Shaft No. 1, Shaft No. 2, and Youghiogheny No. 1, 2, and 4.

Penn Gas Coal Company, Irwin Station, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 472,786 tons; $472,786.

Whole number of persons employed, 850.

Amount of capital employed in business, $2,000,000.

Amount paid annually for wages of employés, $286,242 51.

Amount paid for materials used in business, $18,972 65.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners,	650	. . .	$1 82	. . .	. . .	180	
Outside laborers,	76	. . .	1 10	. . .	10		
Inside laborers,	31	23	1 35	$0 70	10		
Outside mechanics,	12	. . .	1 50	. .	10		
Blacksmiths,	7	. . .	1 90	. . .	10		
Inside mule drivers,	47	. . .	1 55	. . .	10		
Weigh-masters,	4	. . .	1 40	. . .	10		
Dumpers,	9	. . .	1 25	. . .	10		
Mining overseers,	7	. . .	2 50	. . .	10		
Mechanical engineers,	6	. . .	56 00 ⅌ mo.	. . .	10		

S. T. BILLMEYER,
Secretary.

Youghiogheny Colliery.

Salisbury and Baltimore Railroad and Coal Company, Suterville, Westmoreland county.

General office, 13 South Third street, Philadelphia.

Mine located Westmoreland county.

Quantity of tons and value in dollars of annual product: Product this year, 2,500 tons. Can produce 125,000 to 150,000 tons per year, worth $1 per ton, in cars at mines.

Whole number of persons employed, 50. Will employ about 150 when running full.

Amount of capital employed in business, about $25,000.

Amount paid annually for wages of employés, this year, $2,500. Will pay annually $85,000 to $90,000, when working full.

Amount paid for materials used in business: Will foot up about $5,000 for engines, &c.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	38	. .	. . . .	. . .	. . .	26	
Outside laborers,	2	. . .	$1 25	. . .	10		
Inside laborers,	2	. . .	1 35				
Outside mechanic,	1	. . .	1 50				
Inside mule drivers,	4	. . .	1 50				
Weigh-master,	1	. . .	1 25				
Dumper,	1						
Mining overseer,	1	. . .	2 00				

CHARACTERISTICS OF COLLIERY.—This colliery has been idle for several years, in fact, it is but a new opening. Present concern took hold of it in July last, and have been making improvements, which are still going on. But little coal was run during the season, merely a few samples. Expect to start up full in spring and work mine to full capacity. The coal is considered best gas coal ever found, and gives perfect satisfaction wherever it has been. Colliery is situated at the mouth of Sewickley creek, White Heath station, Baltimore and Ohio railroad, Pittsburgh division. Mine is well drained by pumps, worked with steam engine.

S. & B. R. R. & COAL CO.,
Per C. L. ZIMMERMAN.

Isabella Coke Works.

Isabella Furnace Company, Cokeville, Westmoreland county.
Mine located in Westmoreland county.
Whole number of persons employed, 126.
Amount of capital employed in business, $400,000.
Amount paid annually for wages of employés, $60,000.
Amount paid for materials used in business, $6,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	65	. . .	$1 60	. . .	10	300	
Outside laborers, . . .	40	. . .	1 40	. . .	10	300	
Inside laborers, . . .	2	. .	1 40	. . .	10	300	
Outside mechanics, . .	6	. . .	2 00	. . .	10	300	
Inside mechanics, .	2	. . .	2 00	. . .	10	300	
Outside mule drivers,	2	. . .	1 65	. . .	10	300	
Inside mule drivers, .	6	. . .	1 65	. . .	10	300	
Dumpers, ...	2	. . .	1 90	. . .	10	300	
Mining overseer, . . .	1	. . .	4 00	. .	10		

WM. C. GRIST,
Superintendent.

Buckeye Mines.

John M. Cochran, Stauffer, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 2,600 tons; $23,400.

Whole number of persons employed, 35.

Amount of capital employed in business, $85,000.

Amount paid annually for wages of employés, $15,795 45.

Amount paid for materials used in business, $1,500.

Miners on contract, men, 15; boys, 35; daily wages paid men, average, $1 57; hours worked per day, 8; days in operation during year, 283; outside laborers, (coke burners,) 14; outside mechanic, 1; outside mule driver, 1; inside mule drivers, 3; mining overseer, 1.

JOHN M. COCHRAN.

Millwood Shaft.

Millwood Coal and Coke Company, Millwood Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons, and value in dollars of annual product, 45,757 tons; value, $36,800.

Whole number of persons employed, 70.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $25,989 54.

Amount paid for materials used in business, $5,844 68.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	50	5	. . . .	. . . .	10	200	
Outside laborers, . . .	3	. . .	$1 00	. . . .	10	200	
Inside laborers, . . .	3	. . .	1 25	. . . .	10	200	
Outside mechanic, . .	1	. . .	1 25	. . . .	10	200	
Inside mule drivers, .	6	. . .	1 00	. . . .	10	200	
Weigh-master, ...	1	. . .	1 25	. . . .	10	200	
Mining overseer, . . .	1	. . .	1 80	. . . .	10	200	

A. L. MASSEY, *Secretary.*

American Coal and Coke Works.

Samuel Warden & Co., Stoners, Westmoreland county, Pa.

Mine located in East Huntingdon township.

Quantity of tons, and value in dollars of annual product: 6,356 tons coke, at 92 cents, $5,847 52; 4,000 bushels raw coal, at 2¼ cents, $90—$5,937 52.

Whole number of persons employed, 12.

Amount paid for materials used in business: About $30,000.

Amount paid annually for wages of employés, $4,000.

Amount paid for materials used in business, $300.

Number of miners, 11 men, 1 boy; wages paid men, 20 cents per wagon for digging; 27 cents per wagon for digging headings; 15 cents per wagon for drawing coke; 3 cents per wagon for hauling coal; 70 cents per car for forking coke; engineer, $1 50 per day; outside work, 90 cents per day. Hours worked per day, about 9. Days in operation, 257.

REMARKS.—Our coal is soft bituminous, known as the Connellsville coal. Business has been extremely bad this year, not leaving scarcely any margin, prices being very low, and the want of sufficient water and want of cars has been the means by which our product has been diminished. The future does not look very much brighter, but we live by faith, and hope that the year coming may bring with it an improvement in price, and an increased demand.

SAMUEL WARDEN & CO.

White Hall Mine.

Youghiogheny Coal Hollow Coal Company, Youghiogheny P. O., Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 28,000 gross tons; $28,000.

Whole number of persons employed, 100.

Amount of capital employed in business, $250,000.

Amount paid annually for wages of employés, $25,445 59.

Amount paid for materials used in business, $1,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	75	. . .	From $1 20 to $1 80	From 55c. to 60c.	10 hours.	About 100—a great deal of broken time.	
Outside laborers,	2	. . .					
Inside laborers,	2	2					
Outside mechanic,	1	. . .					
Inside mule drivers,	6	. . .					
Weigh-master,	1	. .					
Dumpers,	2	. . .					
Mining overseer,	1	. . .					
Superintendent,	1	. .					

REMARKS.—Our coal lays in the dip, the mine has to be pumped. Coal is bituminous, and considered one of the best gas coals that goes into the market. The reason we have not run more is on account of tax, and a great deal of foreign coal coming in. We ship all coal east to Baltimore, over the Baltimore and Ohio railroad.

M. OSBORN, *Supt.*

Leechburg Colliery.

D. B. Ashbaugh, Lessee and Superintendent, Leechburg, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons, and value in dollars of annual product: 38,000 tons; value of, $38,000.

Whole number of persons employed, average 55.

Amount of capital employed in business, $25,000.

Amount paid annually for wages of employés, about $21,000.

Amount paid for materials used in business, $5,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	*38	4	†$ 50	. . .	8 hours.	260 days.	* Average.
Outside laborers, . . .	3	. . .	1 40	. . .			† Per ton 2,000 pounds.
Inside laborers, . . .	2	. . .	1 40	. . .			
Inside mechanic, . . .	1	. . .	1 60	. . .			
Inside mule driver, .	1	3	1 50	$1 00			
Weigh-master, ...	1	. . .	1 60	. . .			
Dumper, ...	1	. . .	1 40	. . .			
Mining overseer, . . .	1	. . .	1 60	100			

REMARKS.—This mine is located on Western Pennsylvania division of Pennsylvania railroad, in Westmoreland county, near Leechburg, and has been in operation about ten years, shipping from 3,000 to 5,000 tons per month, and has not been idle over four months during the ten years. The product is shipped east to Mantua, Columbia, and Altoona. The Western Pennsylvania railroad is also supplied by these mines, all their engines take coal at this tipple.

D. B. ASHBAUGH, *Supt.*

Shafton.

Shafton Coal Company, Philadelphia, also Irwin, Westmoreland county, Pennsylvania.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 2,500 tons; value, $25,000.

Whole number of persons employed, 55.

Amount of capital employed in business, $230,000.

Amount paid annually for wages of employés, $19,000.

Amount paid for materials used in business, $5,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	43	. . .	50 cts. per ton.	. . .	. . .	300	
Outside laborers,	3	. . .	$1 25	. . .	. . .	300	
Inside laborer,	1	. . .	1 25	. . .	. . .	300	
Outside mechanics,	3	. . .	1 75	. . .	. . .	300	
Inside mule drivers,	3	. . .	4½ c. pr. wagon.	. . .	. . .	300	
Weigh-master,	1	. . .	1 25	. . .	. . .	300	
Mining overseer,	1	. . .	3 00	. . .	. . .	300	

J. R. SOWER,
Vice President.

Emma Mines.

Isaac F. Overholt, Mount Pleasant, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 15,600 tons; value, $15,600.

Amount of capital employed in business, $55,000.

Amount paid annually for wages of employés, $10,800.

Amount paid for materials used in business, $250.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	9	. .	$1 66⅔	. . .	7	300	
Cokers and can forkers,	7	. .	1 25	. . .	6	300	
Laborers, ...	. . .	5	. . . .	70cts.	7	300	
Outside mechanic, . .	1	. .	2 00	. . .	9	300	
Outside mule driver, .	1	. .	1 65	. . .	7	300	
Inside mule driver, .	1	. .	1 75	. . .	7	300	
Mining overseer, . . .	1	. .	2 00	. . .	6	300	
Civil engineer, ...	1	. .	5 00	. . .	. . .	3	
Pumper, ...	1	. .	1 30	. . .	8	300	

REMARKS.—The mine is well ventilated, and in good condition. The coke trade during the year has been good, consumption being equal to supply. The price has been very low, occasioned by the complication of railroad tariffs, in connection with a few shippers of coke, who, to a great extent, keep manufacturers out of the direct trade. The trade in eastern Pennsylvania has largely increased, and Connelsville coke is now recognized as the best fuel, for blast furnaces, in America. The furnaces find it cheaper, at a greater cost, than anthracite coal.

ISAAC F. OVERHOLT.

Greensburg Mines.

Greensburg Coal Company, Greensburg, Westmoreland county.

Mine located in Westmoreland county.

Quantity of tons and value in dollars of annual product, 20,000 tons; value, $20,000.

Whole number of persons employed, 33.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $12,000.

Amount paid for materials used in business, $4,000.

Miners on wages, men, 22; miners paid by the ton, and laborers from $1 25 to $1 80 per diem; hours worked per day, 9; days in operation during year, 213; outside laborers, 2; inside laborer, 1; outside mechanic, 1; outside mule driver, 1; inside mule drivers, 4; weigh-master, 1; mining overseer, 1.

A. W. JONES, *Superintendent.*

Union Coal Works.

Jacob Tomer, junior, Webster, Westmoreland county.

Mine located in Westmoreland county.

Whole number of persons employed, from 40 to 65.

Amount paid annually for wages of employés, 2 to 2½ cents per bushel.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	45	. . .	. . .	. . .	10	125	
Outside laborer, . . .	1	. . .	$1 50	. . .			
Inside mule drivers, .	3	. . .	2 00	. . .			
Weigh-master, . . .	1	. . .	2 25	. . .			
Mining overseer, . . .	1	. . .	2 50	. . .			

JACOB TOMER, Jr.

Eureka Mines.

Fox, Kifer & Co., (D. Fox, W. A. Kifer, and S. Aspey,) Jacob's Creek, Westmoreland county.

Quantity in tons and value in dollars of annual product, 24,336 tons; value, $16,577 76.

Whole number of persons employed, 41.

Amount of capital employed in business, $43,000.

Amount paid annually for wages of employés, $11,542 08.

Amount paid for materials used in business, $595 80.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	30	4	$1 80	. . .	. . .	234	
Outside laborers, . . .	2	. . .	1 00	. . .	. . .	234	
Outside mechanic, . .	1	. . .	1 50	. . .	. . .	234	
Inside mechanic, . . .	1	. . .	1 50	. . .	. . .	234	
Outside mule driver, .	1	. . .	1 25	. . .	. . .	234	
Inside mule driver, .	1	. . .	1 25	. . .	. . .	234	
Weigh-master, ...	1	. . .	1 25	. . .	. . .	234	

FOX, KIFER & CO.,
D. F. R.

Westmoreland Mines.

Westmoreland Coal Company, Irwin Station, Westmoreland county.

Mine located in Westmoreland and Allegheny counties.

Quantity of tons and value in dollars of annual product, 364,000 tons; $345,800.

Whole number of persons employed, 432.

Amount of capital employed in business, $1,800,000.

Amount paid annually for wages of employés, $231,222.

Amount paid for materials used in business, $21,398.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	340	. . .	$1 60	. . .	8 10	207	
Outside laborers, . . .	21	. . .	1 15 to 1 25	. . .	10	250	
Inside laborers, . . .	10	. . .	1 35 to 1 60	. . .	10	250	
Outside mechanics, . .	7	. . .	1 50 to 2 00	. . .	10	300	
Outside mule drivers,	8	. . .	1 25 to 1 45	. . .	10	200 300	
Inside mule drivers, .	32	. . .	1 45 to 1 60	. . .	10	207	
Weigh-masters, . . .	5	. . .	1 50 to 2 00	. . .	10	225	
Mining overseers, . .	4	. . .	2 25 to 3 00	. . .	. . .	300	
Foremen, ...	5	. . .	2 25 to 3 00	. . .	. . .	300	
Office, ...	6						

REMARKS.—The coal mined by this company is bituminous, from the Pittsburgh seam, and is principally used in the manufacture of gas. The depression in this trade continues, and the new year opens without any prospect of improvement in amount of the demand, and with certainty of further reduction in price. The competition with untaxed coals of Virginia and West Virginia continues; and during the past year English coals have been imported into this country to a greater extent than for many years, and at lower prices than ever before known. New Castle coal has been delivered to the gas companies in New York for three dollars per ton. The discrimination made by our State laws against coal corporations, when competing with individuals, by the tax of three cents per ton, is felt more severely as prices decline. A coal operator was prevented from leasing coal from this company during the past year, because the three cent tax made the royalty higher than he could lease coal from an individual owner, adjoining.

F. H. JACKSON,
Vice President.

COAL, BITUMINOUS—Employees, Production, and Value.

NAME OF COLLIERY, OR PERSONS OPERATING SAME.	Post Office Address.	Mine—Where Located.	Number of tons mined.	Value.	Whole number of persons employed.	Capital employed in business.	Amount paid annually for wages.	Amount paid for materials used in business.
Allegheny County:								
O'Neil & Co.,	West Elizabeth,	Allegheny county,	63,122	$72,590	150	$55,000	$47,000	$11,000
Morris McCue,	Pittsburgh,	Allegheny county,	27,360	25,992	67	50,000	24,000	5,000
P. Y. Hite,	Hite,	Allegheny county,	40,000	45,000	113	....	25,000	
James O'Neil,	Boston,	Allegheny county,	45,600	47,000	145	150,000	35,000	
George Lysle & Sons,	Pittsburgh,	Allegheny county,	6,000	60,000	161	200,000	50,000	6,000
Youghiogheny Shaft,	Pittsburgh,	Westmoreland county,	....	....	1	....	624	2,600
Joseph Walton & Co.,	Pittsburgh,	Allegheny county,	220,000	275,000	557	1,005,500	175,000	46,919
Thomas Fox,	Pittsburgh,	Allegheny county,	9,821⅛	2,584	29	6,000	9,797	3,823
A. A. Kinney & Bro.,	Braddock,	Allegheny county,	4.635	....	10	5,000	2,939	500
Fair Haven,	Pittsburgh,	Allegheny county,	68,500	85,700	144	....	49,427	
William Stone's estate,	McKeesport,	Allegheny county,	2,000,000	100,000	200	150,000	100,000	6,000
John McIntyre,	Pittsburgh,	Allegheny county,	62,884	92,331	140	....	51,017	2,370
Jefferson,	McKeesport,	Allegheny county,	32,759	40,000	122	36,000	28,000	5,000
I. D. Risher,	Hope Church,	Allegheny county,	31,933	33,910	156	12,000	30,530	
Duquesne Coal Company,	Pittsburgh,	Allegheny county,	42,059	42,059	144	200,000	37,115	1,968
Mansfield Coal and Coke Company,	Pittsburgh,	Allegheny county,	29,091	26,181	125	250,000	22,000	1,500
Robbins & Jenkins,	McKeesport,	Allegheny county,	46,133	....	155	60,000	34,057	8,000
J. C. Risher & Co.,	Dravosburgh,	Allegheny county,	50,261	58,804	208	200,000	50,961	6,000
Wood Coal Works,	Pittsburgh,	Allegheny county,	17,769	18,000	40	5,000	13,000	2,000
Fort Pitt Mines,	Pittsburgh,	Allegheny county,	25,500	24,000	111	224,200	16,400	1,300
Corey & Co.,	Braddock,	Allegheny county,	37,600	47,000	76	100,000	26,400	8,000
New York and Cleveland Gas Coal Company,	Pittsburgh,	Allegheny county,	360,000	400,000	616	1,000,000	265,099	
John Weinman,	Wilkinsburg,	Allegheny county,	6,840	7,113	13	2,000	8,556	400
G. & W. Jones,	West Elizabeth,	Allegheny county,	56,240	47,000	112	85,000	32,643	947
William Neel,	McKeesport,	Allegheny county,	24,120	20,000	73	30,000	13,000	1,620
James Lynn & Co.,	Coal Valley,	Allegheny county,	7,600	75,000	154	150,000	9,700	8,000
H. B. Hays & Bro.,	Pittsburgh,	Allegheny county,	146,682	154,0·7	537	200,000	126,574	25,000
Enterprise,	Banksville,	Allegheny county,	44,000	37,620	87	60,000	32,619	750
Iron City Coal Works,	Phillips & Mittenzing,	Allegheny county,	23,000	24,000	86	80,000		
Laurel Hill Mines,	McDonald,	Allegheny county,	34,859	35,000	95	100,000	30,000	1,200
			3,564,368	$1,896,000	4,729	$4,415,700	$1,341,458	$162,897

Armstrong County:								
T. B. & A. Laughlin,	Mahoning,	Armstrong county,	16,200	$20,250	55	$25,000	$14,000	$800
H. R. Fullerton,	Parker City,	Butler county,	2,600	43,680	16	3,000	2,880	200
E. J. Bowen,	Reimerton P. O.,	Armstrong county,	6,000	5,321	29	21,000	4,500	2,950
			24,800	$79,254	100	$49,000	$21,380	$3,950
Beaver County:								
I. F. Mansfield,	Camelton,	Beaver county,	18,000	$31,500	60	$10,000		
Clinton Coal Company,	Rock Point,	Lawrence county,	11,639	15,712	59	10,000	$12,268	$1,105
			29,639	$47,212	119	$20,000	$12,268	$1,105
Bedford County:								
R. B. Wigton,	Six-Mile Run,	Bedford county,	20,000	$12,000	45	$100,000	$11,000	
Morley & Langdon,	Hopewell,	Bedford county,	35,000	24,500	73	36,000	19,000	$1,320
			55,000	$36,500	118	$136,000	$30,000	$1,320
Blair County:								
Porter Colliery,	Hollidaysburg,	Blair county,	26,000	$20,800	106	$15,000	$19,000	
Blair Iron and Coal Company,	Hollidaysburg,	Blair county,	80,302	. . . . . .	175	. . . .	54,873	$9,562
			106,302	$20,800	281	$15,000	$73,873	$9,562
Bradford County:								
Towanda Coal Company,	Towanda,	Bradford county,	168,496	$336,992	365	. . . .	$181,513	$12,553
Carbon Run,	South Bethlehem,	Bradford county,	127,753	. . . .	198	. . . .	85,113	11,268
			296,249	$336,992	563	. . . .	$269,626	$23,821
Butler County:								
A. Burnett,	Hilliard,	Butler county,	13,200	$13,200	60	$16,000	$7,500	$1,000
			13,200	$13,200	60	$16,000	$7,500	$1,000
Cambria County:								
Tunnel Hill,	328 Walnut street, Philadelphia,	Cambria county,	7,090	. . . .	33	$3,920	. . . . . .	$578
Cambria Iron Company,	Johnstown,	Cambria county,	197,893	$178,103	397	. . . .	$121,000	8,500
			204,983	$178,103	430	$3,920	$121,000	$9,378
Cameron County:								
Mount Hope Colliery,	Cameron,	Cameron county,	39,217	$19,021	100	$50,000	$35,000	$5,000
			39,217	$49,021	100	$50,000	$35,000	$5,000
Centre County:								
Bellefonte and Snow Shoe Railroad Company	Bellefonte,	Centre county,	39,047	$29,285	79	. . . . . .	$26,055	
			39,047	$29,285	79	. . . .	$26,055	

COAL, BITUMINOUS—Employees, Production, and Value—*Continued.*

NANE OF COLLIERY, OR PERSONS OPERATING SAME.	Post Office Address.	Mine—Where Located.	Number of tons mined.	Value.	Whole number of persons employed.	Capital employed in business.	Amount paid annually for wages.	Amount paid for materials used in business.
Clarion County :								
Fairmount Coal Company,	New Bethlehem,	Clarion county,	53,273	. . . .	89	200,000		
Thomas J. Skidmore,	Fredonia,	Clarion county,	5,500	49,646	120	50,000	33,317	3,192
Sligo Branch Coal Company,	Reimersburg,	Clarion county,	6,454	5,551	78	20,000	3,960	810
			65,327	55,197	287	270,000	37,277	4,002
Clearfield County :								
Franklin,	328 Walnut st., Philadelphia,	Clearfield county,	97,855	. . . .	184	. . . .	63,084	8,322
Morrisdale,	Morrisdale Mines,	Clearfield county,	96,350	. . . .	151	. . . .	51,831	6,000
Reading,	Osceola Mills,	Clearfield county,	25,000	. . . .	32	. . . .	12,000	
Excelsior,	Loutzdale,	Clearfield county,	120,000	85,000	225	50,000	75,000	
Moshannon Coal Company,	Sobieski,	Clearfield county,	28,163	19,714	51	52,206	17,357	1,800
Beaver Run,	Philadelphia,	Clearfield county,	36,000	27,000	60	25,000	15,120	1,500
Penn,	Philadelphia,	Clearfield county,	23,000	20,000	45	20,000	17,000	1,000
Laurel Run,	Philadelphia,	Clearfield county,	32,500	24,400	45	75,000	16,450	3,500
Campbell Bros.,	Philipsburg,	Clearfield county,	13,454	8,072	20	15,000	7,150	321
Thomas Barns & Bro.,	Philipsburg,	Clearfield county,	8,000	5,600	15	500	4,400	200
Cuba Mines,	Philipsburg,	Clearfield county,	5,400	3,240	14	12,000	3,000	150
			485,722	193,026	932	249,706	282,291	22,793
Elk County :								
Daguscahonda,	Daguscahonda,	Elk county,	76,513	68,861	147	500,000	54,423	9,694
St. Mary's,	Williamsport,	Elk county,	95,797	109,840	140	295,000	62,041	
			172,310	178,701	287	795,000	116,463	9,694
Fayette County :								
Washington,	Bradford,	Fayette county,	8,796	7,528	18	28,000	6,676	300
Sterling Mines,	Dawson,	Fayette county,	120,000	120,000	209	500,000	96,000	12,000
Globe Mines,	A. A. Hutchinson & Bro.,	Fayette county,	44,000	50,000	60	100,000	36,000	10,000
Excelsior Coal Works,	Daniel Bortner,	Fayette county,	5,335	5,395	24	300	4,259	
Spring Grove,	Dawson,	Fayette county,	34,550	. . . .	51	50,000	25,200	
Jackson Mines,	Dawson,	Fayette county,	30,000	. . . .	45	. . . .	20,000	3,000

John S. Cunningham & Co.,	Brownsville,	Fayette county,	25,008	17,256	70	18,000	14,000	18,000
Summit Mines,	Broadford,	Fayette county,	45,600	30,000	50	....	27,000	
Trumbull & Hall,	Fayette City,	Fayette county,	2,280	....	65	30,000	30,000	
Fager & Frye,	Fayette City,	Fayette county,	1,459	11,380	59	25,000	9,850	100
Tyrone Mines,	Pittsburgh,	Fayette county,	55,740	....	53			
Pittsburgh and Con. Gas Coal and Coke Co.,	Pittsburgh,	Fayette county,	104,000	93,600	202	150,000	85,418	7,300
Little Alps Mines,	California,	Fayette county,	41,800	....	78	15,000	30,000	
			518,608	335,159	984	916,300	384,403	50,700
Fulton County:								
Wishart,	Harrisonville,	Fulton county,	160	100	2	....	96	10
			160	100	2	....	96	10
Huntingdon County:								
Mooredale,	Philadelphia,	Huntingdon county,	14,500	10,860	35	20,000	11,000	500
			14,500	10,860	35	20,000	11,000	500
Jefferson County:								
Frank Williams,	Reynoldsville,	Jefferson county,	11,632	10,706	26	8,000	7,390	1,387
Pancoast,	Pancoast P. O.,	Jefferson county,	23,000	18,208	43	20,000	10,927	1,202
Diamond,	Reynoldsville,	Jefferson county,	14,229	10,974	40	20,000	9,100	1,105
			48,861	39,888	109	48,000	17,417	3,694
Lawrence County:								
Welsh Bank,	Wampum,	Lawrence county,	17,618	22,022	135	35,000	15,856	1,200
Davidson's Bank,	Wampum,	Lawrence county,	21,000	32,000	81	100,000	16,000	1,000
Wallace Coal Bank,	New Castle,	Lawrence county,	2,132	2,165	5	1.500	1,343	50
Lee & Patterson,	Rock Point,	Lawrence county,	38,272	47,840	118	150,000	41,077	3,500
			82,022	104,527	339	286,500	74,276	5,750
Lycoming County:								
McIntyre Coal Company,	Elmira, New York,	Lycoming county,	156,400	....	454			
			156,400	....	454			
McKean County:								
Drift, No. 1,	Clermont,	McKean county,	71,000	....	170	....	75,000	
Buttsville Coal Mines,	Alton,	McKean county,	31,650	71,372	124	....	45,304	
			102,650	71,372	294	....	120,304	
Mercer County:								
Morris Coal Company,	Orangeville, Ohio,	Mercer county,	21,665	43,330	74	40,000	21,343	17,433
Mercer Iron and Coal Company,	Stoneboro',	Mercer county,	75,035	95,800	198	320,700	65,763	8,500
Buhl, Westerman & Co.,	Sharon,	Mercer county,	52,316	86,321	.....	40,000	42,124	1,568
Mercer Mining and Manufacturing Co.,	Pardoe,	Mercer county,	95,000	....	210	95,000	82,000	8,000
Bethel Coal Company,	Sharon,	Mercer county,	10,485	19,921	.....	140,000		
Pacific Slope,	Sharon,	Mercer county,	18,089	32,560	46	20,000	27,183	3,500
			272,590	277,932	528	655,700	241.413	39,001

COAL, BITUMINOUS—Employees, Production, and Value—*Continued.*

NAME OF COLLIERY, OR PERSON OPERATING SAME.	Post Office Address.	Mine—Where Located.	Number of tons mined.	Value.	Whole number of persons employed.	Capital employed in business.	Amount paid annually for wages.	Amount paid for materials used in business.
Somerset County:								
Cumberland and Elk Lick Coal Company,	Meyersdale,	Somerset county,	53,330	$34,674	73	$10,000	$28,937	$2,492
Berlin,	Berlin,	Somerset county,	5,000	3,500	16	1,000	2,250	700
Keystone,	Keystone Junction,	Somerset county,	52,000	45,600	110	. . . .	36,500	5,300
Cumberland,	Meyersdale,	Somerset county,	14,000	. . . . . .	30	5,000		
Buffalo Creek,	Washington, D. C.,	Somerset county,	184	92	13	. . . . .	694	75
Boleman Mines,	. . . .	Somerset county,	350	. . . .	2	2,000	350	300
			124,864	$38,174	$244	$18,000	$68,731	$8,867
Tioga County:								
Fall Brook,	Watkins, N. Y.,	Tioga county,	74,407	$89,288	137			
Morris Run,	Morris Run,	Tioga county,	197,000	. . . . .	414			
Blossburg Coal Company,	Corning, N. Y.,	Tioga county,	196,000	245,000	731	100,000	197,000	
Antrim,	Watkins, N. Y.,	Tioga county,	143,230	171,876	319			
			610,637	$506,164	1,701	$100,000	$197,000	
Venango County:								
Maple Grove,	Raymilton,	Venango county,	4,000	$10,000	40	$60,000	$8,245	$1,000
Cranberry Coal Mines,	Oil City,	Venango county,	5,000	10,000	30	250,000	7,560	500
Woods,	Raymilton,	Venango county,	169	284	2	200	142	1,100
Tiel & McDowell,	Franklin,	Venango county,	400	. . . .	16	. . . .	. . . . . .	18,800
			9,569	$20,284	88	$310,260	$15,887	$21,400
Washington County:								
Joseph Garrow,	California,	Washington county,	1,221	. . . .	15	$3,000	$50	
Robbins Block Coal Mines,	Midway,	Washington county,	66,036	$59,236	127	100,000	50,238	4,935
Blackburn & Mort,	Coal Bluff,	Washington county,	20,778	20,105	56			
Walnut Hill,	Midway,	Washington county,	25,342	21,695	100	100,000	21,920	
Midway Block Coal Mines,	Midway,	Washington county,	9,500	9,500	80	. . . . .	11,703	. . . . .
Enterprise Coal Works,	Washington,	Washington county,	9,000	11,700	23	50,000	6,300	2,000
Stockdale's,	Monongahela City,	Washington county,	300,000	21,000	70	10,000	15,000	2,000

Knob Coal Works,	West Brownsville,	Washington county,	8,750	6,387	43	6,000	7,000	
J. S. Neel,	Pittsburgh,	Washington county,	72,000	62,000	96	46,000	36,700	1,060
			512,627	$211,623	610	$315,000	$148,903	$9,995
Westmoreland County:								
Saltsburg Coal Company,	Saltsburg,	Westmoreland county,	53,944	$50,246	71	$200,000		
Lynch & Robinson,	Webster,	Westmoreland county,	18,000	17,300	75	. . . . . .	$14,000	$1,500
Penn Gas Coal Company,	Irwin Station,	Westmoreland county,	472,786	472,786	850	2,000,000	286,242	18,972
Youghiogheny,	Sauterville,	Westmoreland county,	150,000	150,000	50	25,000	2,500	5,000
Isabella Coke Works,	Cokeville,	Westmoreland county,	90	. . . . . .	126	400,000	60,000	6,000
Buckeye Mines,	Stauffer P. O.,	Westmoreland county,	26,000	23,400	35	85,000	15,795	
Millwood Coal and Coke Company,	Millwood,	Westmoreland county,	45,757	36,800	70	200,000	25,989	5,844
American Coal and Coke Works,	Stoner's,	Westmoreland county,	6,408	5,937	12	30,000	4,000	300
White Ball,	Youghiogheny,	Westmoreland county,	28,000	28,000	100	250,000	25,415	1,500
Leechburg,	Leechburg,	Westmoreland county,	38,000	38,000	55	25,000	1,000	5,000
Shafton,	Philadelphia,	Westmoreland county,	2,500	25,000	55	230,000	19,000	5,000
Emma Mines,	Mount Pleasant,	Westmoreland county,	15,600	15,600	28	55,000	10,800	250
Greensburg Mines,	Greensburg,	Westmoreland county,	20,000	20,000	33	30,000	12,000	4,000
Union Coal Works,	Webster,	Westmoreland county,	. . . . . .	. . . . . .	65			
Eureka Mines,	Jacob's Creek,	Westmoreland county,	24,838	16,577	41	43,000	11,512	595
Westmoreland Coal Company,	Irwin Station,	Westmoreland and Allegheny counties,	364,000	845,800	432	180,000	231,222	21,398
J. W. Clarke,	Belle Vernon,	Westmoreland county,	16,457	10,697	44	60,000	9,000	3,000
			1,271,878	$1,256,143	2,140	$5,433,000	$728,535	$78,359

COAL, BITUMINOUS—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Allegheny county :									
O'Neil & Co.,	150	. . . .	150	10	140	$2 25	. . . .	$1 75	. . . .
Morris McCue,	65	2	67	6 & 7	275	2 50	. . . .	2 50	75
P. Y. Hite,	115	8	113	. . . .	. . . .	*1¾ c.	. . . .	1 00	40 to 65 cts.
James O'Neil,	145	. . . .	145	10	100	1 75 to 2 00			
George Lysle & Sons,	151	10	161	9	150	2 00			
Youghiogheny Shaft,	1	. . . .	1						
Joseph Walton & Co.,	557	. . . .	557	. . . .					
Thomas Fox,	29	. . . .	29	10	308	. . . .	. . . .	1 30 to 1 75	. . . .
A. H. Kenney & Bro.,	10	. . . .	10	. . . .	182	1 50			
Fair Haven,	134	10	144	. . . .	235	1 75	. . . .	1 15 to 2 00	. . . .
William Stone's estate,	200	. . . .	200	12	. . . .	3 60			
John McIntyre,	138	2	140	10	275	. . . .	. . . .	1 50	55
Jefferson,	121	1	122	8 to 10	285	2 00	. . . .	1 75	. . . .
I. O. Risher,	152	6	158	8 to 12	94	2 00			
Duquesne,	129	15	144	. . . .	. . .	. . . .	*2⅓ c.	1 23	. . . .
Mansfield Coal and Coke Co.,	125	. . . .	125	10	180	. . . .	†60 c.	1 25	. . . .
Robbins & Jenkins,	145	10	155	10	300	2 50	. . . .	2 25	1 25
J. C. Risher & Co.,	190	18	208	10	312	†65 c.	. . . .	1 50	1 00
Wood Coal Works,	40	. . . .	40	. . . .	300				
Fort Pitt Mines,	100	11	111	10	275	. . . .	℔ bu.	1 25	. . . .
Corey & Co.,	76	. . . .	76	9	250	. . . .	. . . .	1 25 to 2 00	. . . .
N. York & Cleveland Gas Coal Co.,	616	. . . .	616	10	117	. . . .	2 32	1 51	. . . .
Jacob Weinman,	12	1	13	. . . .	290	2 00	. . . .	. . . .	. . . .
G. & W. Jones,	112	. . . .	112	10	240	. . . .	. . . .	1 75	. . . .
William Neel,	73	. . . .	73	. . . .	190	. . . .	. . . .	1 50	. . . .
James Lynn & Co.,	150	4	154	. . . .	130	. . . .	. . . .	2 00	1 50
H. B. Hays & Bro.,	537	. . . .	537	10	117	*2⅔ c.	. . . .	1 75	. . . .
Enterprise,	87	. . . .	87	10	210	1 75	*2½ c.	1 50	. . . .
Iron City Coal Works,	86	. . . .	86	. . . .	160	. . . .	. . . .	1 75	. . .
Laurel Hill mines,	95	. . .	95	10	203	. . . .	. . .	1 50	. . . .
	4,631	98	4,729						
Armstrong county :									
T. B. & A. Laughlin,	40	14	55	8	275	†43 c.	. . . .	1 35	75
H. R. Fullerton,	10	1 girl. 6	16	10	313	‡40 m. 13 b.			
E. J. Bowen,	29	. . . .	29	8	312	1 25			
	79	21	100						
Beaver county :									
I. F. Mansfield,	60	. . . .	60	8	300	†50 c.	. . . .	1 25	. . . .
Clinton Coal Company,	53	6	59	10	175	2 23 m. 75 b.	. . . .	1 25	. . . .
	113	6	119						

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*Per bushel. †Per ton. ‡Per month. §Per wagon.

WAGES.

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
$1 75	....	$2 00	$2 00	$1 00	....	$1 75	....	$1 50	....	...	$2 00	$1 75	
2 50	....	2 50	....	2 50	....	2 50	....	....	....	..	2 50	2 50	
1 40	$0 75	1 00 to 1 70	....	1 80	....	1 55	....	....	....	$0 65	....	*17 c.	
2 16⅔	....	....	....	12 c. per trip.	....	....	....	1 75					
....	1 00	1 75 to 1 25	1 50 to 1 25	....	$1 15	1 75	1 00	1 00 to 1 25	....	...	2 25	1 75	$10 00
2 00	....	2 25	....	....	....	1 75	....	2 00	....	...	3 85	2 00	
....	....	....	1 50	1 75	....	2 25	....	2 00 m. 1 25 b.	1 75	...	2 75	2 37	2 00
1 55	....	1 62½	....	....	....	1 75	....	..	....	...	2 62½	1 30	2 12½
2 00	....	2 00	....	1 60	....	1 60	....	....	....	....	....	2 25	
2 25	...	....	....	2 25	1 25	2 25	1 25	1 25 to 2 00	....	..	....	2 25	
2 00	....	1 75	2 25	2 25	....	2 25	....	....	1 50	...	2 50	1 75	
1 25	....	1 75	....	...	1 00	§4¼ c.	....	..	....	...	‡60 00	‡50 00	
....	....	....	....	....	....	1 75 to 2 00	....	1 50	1 75	...	3 00	1 75	
1 35	....	1 87	....	1 70	....	1 70	....	....	....	...	2 75	2 25	
....	....	....	....	....	....	1 50							
....	....	2 25	....	....	....	1 75	....	....	....	..	3 50	2 50	
1 50	....	2 25	....	....	....	1 75	....	....	....	...	3 00	2 25	
2 00	....	3 50	....	2 00	....	2 25	1 50	2 00	....	...	3 00	3 00	
1 75	....	2 00	....	1 75	....	1 75	....	3 00	....	...	2 50	3 00	
1 75	....	2 00	....	..	....	2 50	....	1 50	....	...	2 50	2 00	
....	....	2 00	....	....	....	....	....	....	....	...	‡100 00	2 00	
1 50	....	....	1 75	1 50 & 2 00	....	1 50	....	1 25	....	..	2 50	2 00	
1 35	....	....	....	....	....	....	75	....	....	...	‡60 00	50	
....	....	....	....	1 25	...	1 25	....	1 25	....	...	3 00	1 25	
1 70	....	...	2 00	75	75	1 30	....	1 25	....	...	3 00	1 25	

COAL, BITUMINOUS—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Bedford county :									
R. B. Wigton, ...	45	. . . .	45	10	150	$1 25 to 1 50	. . . .	$1 25	. . .
Morley & Langdon, ...	73	. . . .	73	9 to 10	264	1 00 to 1 50 m. 50 to 75c. b.			
	118	. . . .	118						
Blair county ;									
Porter Colliery, ...	85	21	106	9	. . . .	. . . .	†30 c.	1 00	$1 00
Blair Iron and Coal Company, . . .	130	45	175	10	. . . .	†36 c.	. . . .	1 45	70
	215	66	281						
Bradford county :									
Towanda Coal Company, ...	337	28	365	10	250	†60c.	. . . .	1 25	. . .
Carbon Run, ...	182	15	198	10	200	†52 c.	$1 71	95	. . .
	520	43	563						
Butler county :									
A. Burnett, ...	50	10	60	9	132	†50 c.	. . . .	. . . . .	1 40
Cambria county :									
Tunnel Hill, ...	28	5	33	10	112	1 40			
Cambria Iron Company, ...	319	78	397	. . . .	300	1 25	. . .	78 c. to 1 50	. . .
	347	83	430						
Cameron County :									
Mount Hope Colliery, ...	100	. . . .	100	10	280	†45 c.	. . .	1 25	. . .
Centre county :									
Snow Shoe Railroad Company, . .	77	2	79	10	264	†40 c.	2 00	1 00	. . .
Clarion county :									
Fair Mount Coal Company, ...	86	3	89	9	. . . .	†40, 45 & 50 c.	. . . .	1 10, 1 25 & 1 35	. . .
Mineral Ridge Coal Company, . . .	116	4	120	10	312	†60 c.	. . . .	1 20	50
Sligo Branch Coal Company, . . .	78	. . .	78	10	108	†45 c.	1 20	. . . .	1 20
	280	7	287						
Clearfield county :									
Franklin, ...	141	43	184	10	205	1 50			
Morrisdale, ...	130	21	151	10	240	. . .	. . . .	1 25	. . .
Reading, ...	30	2	32	10	200	†40 c.	. . . .	. . . . . .	. . .
Excelsior, ...	221	4	225	8	290	. . . .	60c. b.	. . . . .	. . .
Moshannon, ...	48	3	51	. . . .	180	. . . .	†40 c.	1 50	. . .
Beaver Run, ...	59	1	60	8	100	†40 c.	. . . .	. . . . . .	. . .
Penn, ...	41	4	45	9	. . .	. . . .	. . . .	. . . . . .	. . .
Laurel Run, ...	36	9	45	9	240	2 58	2 00	1 40	. . .
Campbell Bros., ...	20	. . . .	20	. . . .	212	†40 c.	. . . .	. . . .	. . .
Thomas Barnes & Bro., ...	15	. . . .	15	10	150	. . . .	. . . .	. . . . . .	. . .
Cuba Mines, ...	10	4	14	8	6 mo.	†40 c.	†40 c.		
	845	82	932						

WAGES—*Continued.*

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
....	....	$1 33	....	....	....	$1 25	....	$1 25	$1 25	...	$2 50	$1 25	....
$1 25	$1 25	1 75	$1 25	$1 35	$1 35	1 00 to 1 80	80 c. to 1 00	1 00 to 1 30	....	....	2 50	1 60	
1 35	44	1 60	....	....	....	1 24	87	1 51	....	....	3 12	1 34	1 65
1 30	65	....	....	....	1 00	1 25	....	1 25	....	....	2 66	2 35	4 50
1 24	....	1 80 m. 95c. b.	1 62	1 38	66	1 17	66	1 29	1 14	50	3 47	1 90	
...	....	....	....	....	....	....	....	....	10	1 00	....	1 50	
78c. to 1 50	33c. to 60c.	1 00 to 1 50	....	....	....	80c. to 1 20	60 c. to 75c.	....	....	....	4 00	2 00	
1 50	....	1 50	....	1 25	....	1 50	....	1 25	1 00	...	2 00	2 00	
1 50	....	2 00	....	1 25	....	1 25	....	1 00	....	....	2 62	2 25	
1 10, 1 25 & 1 35	....	2 25 to 2 50	....	75 c. to 1 00	....	1 10, 1 35 & 1 50	....	1 30 to 1 70	1 10	...	....	2 00	
1 20	50	2 25	....	1 20	....	1 40	....	1 20	1 20	...	2 00	2 00	5 00
1 50	75	....	....	....	....	1 35	....	1 25	75	...	2 00	1 25	
..	....	.	....	1 50	....	1 50	...	....	....	....	....	2 00	
1 75	....	1 75	....	1 60	...	1 75	....	1 60	1 60	...	‡75 00	1 75	6 00
....	....	1 50	....	1 50	....	1 50	....	1 50	....	....	2 25	1 50	
....	....	1 00 to 1 50	1 50	1 40	....	1 40	....	1 40	....	....	2 60	1 50	
1 50	60	1 50	....	1 40	11	1 50	....	....	....	....	2 00	2 00	
....	....	1 50	....	2 00	....	1 60	....	50c. and 1 40	....	....	3 00	1 60	6 00
....	....	....	....	....	....	1 50	....	1 50	....	....	....	2 00	
...	....	....	....	1 50	....	1 50							

COAL, BITUMINOUS—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Elk county:									
Daguscahonda,	140	7	147	10	300	†45c.	. . . .	$1 00 to 1 20	$0 60
St. Mary's,	137	3	140	10	300	. . . .	b.,75c. †45c.	1 50	. . . .
	277	10	287						
Fayette county:									
Washington,	18	. . . .	18	. . . .	266	$1 45	. . . .	1 25	. . . .
Sterling Mines,	209	. . . .	209	8	305	1 50	. . . .	1 50	. . . .
Globe Mines,	60	. . . .	60	. . . .	300				
Excelsior Coal Works,	24	. . . .	24	10	100	2 00	. . . .	. . .	. . . .
Spring Grove,	51	. . . .	51	9	300	. . . .	$1 75	1 50	. . . .
Jackson Mines,	45	. . . .	45	9	300	. . . .	1 75	. . .	. . . .
John S. Cunningham & Co.,	70	. . .	70	10	200	1 75	. . . .	1 75	. .
Summit Mines,	50	. . . .	50	. . .	300	1 50	. . . .	1 50	. . . .
Trumbull & Hall,	65	. . . .	65	10	. .	. . . .	. . . .	1 75	
Fager & Frye,	59	. . . .	59	10	144	†54c.	. . . .	2 00	. . . .
Tyrone Mines,	53	. . . .	53	. . . .	300	. . . .	. . . .	1 00 to 1 20	. . . .
Pittsburgh and Connellsville Gas Coal and Coke Company,	196	6	202	10	300	. . . .	. . . .	1 25	. . . .
Little Alps Mines,	60	18	78	10	300	. . . .	†2c.	2 50	6
	960	24	984						
Fulton county:									
Wishart,	2	. . . .	2						
Huntingdon county:									
Mooredale,	32	3	35	8	268	. . . .	75 to 1 50	. . . .	. . . .
Jefferson county:									
Frank Williams',	26	. . . .	26	10	285	. . . .	. . .	1 50	. . . .
Pancoast,	38	5	43	6	246	b.,60c. 1 66	. . . .	. . . .	. . . .
Diamond,	40	. . .	40	10	225	†44c.	. . . .	1 10	. . . .
	104	5	109						
Lawrence county:									
Welsh Bank,	135	. . .	135	. . . .	. . .	1 50	. . . .	1 25	. . .
Davidson's Bank,	69	12	81	8	210	†70c.	1 50	1 25	75
Wallace Coal Bank,	5	. . . .	5	. . . .	200				
Lee & Patterson,	118	. . . .	118	10	270	2 00	. . . .	1 25	. . . .
	327	12	339						
Lycoming county:									
McIntyre,	396	58	454	. . . .	. . . .	. . . .	1 62 to 2 00	1 10	60 to 80
McKean county:									
Drift No. 1,	155	15	170	8	275	1 95	1 75		
Buttsville Coal Mines,	124	. . . .	124	10	255	. . . .	2 25	1 75	88
	279	15	294						
Mercer county:									
Morris Coal Company,	56	18	74	10	218	. . . .	. .	1 25	. . . .
Mercer Coal and Iron Company,	176	22	198	10	263	†68½c.	1 80	1 09	45
Buhl, Westerman & Co.,	. . . .	. . . .	. . . .	10	290	b.,50c. 1 45	. . .	1 25	. . .
Mercer Mining and Manuf'g Co.,	190	20	210	9 to 10	260	b.,50c. 1 40	1 40	1 13	. . . .
Bethel Coal Company.									
Pacific Slope,	43	3	46	10	205	b.,27½c 1 44			
	465	63	528						

WAGES—*Continued.*

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
$1 20	....	$1 60	$1 50	....	....	$1 10	....	$1 20	....	...	$3 75	$1 40	†$100
1 35 and 1 50	....	1 50 and 2 00	....	$1 00 and 1 35	....	1 00 and 1 12	....	1 50	....	...	3 00	†$35	
....	....	1 50	....	1 50	....	1 50	....	..	....	...	1 50		
1 50	....	2 50	2 00	1 50	....	1 50	....	1 75	....	...	2 25		
....	....	....	....	2 00	....	2 00							
....	....	....	....	....	...	1 75	....	....	....	...	2 25		
....	....	1 65	....	1 62½	....	1 50	....	....	....	...	2 25		
1 75	....	...	....	..	....	1 50	....	....	....	...	....	2 00	
...	....	2 00	....	1 25	....	1 65	....	....	....	...	2 25		
2 00	....	....	....	2 00	....	2 00	$2 00	....	....	...	....	2 00	
...	....	....	....	....	....	....	....	....	....	...	....	1 70	
1 65	. .	2 10	2 25	...	....	....	75	1 65	....	...	2 10	1 95	$2 95
2 75	...	....	....	2 00	....	1 50	....	....	....	...	....	2 50	
....	...	1 40	....	....	....	1 40	....	....	....	...	2 00	1 40	
1 50	....	1 75	....	1 25	....	1 35	....	....	....	..	2 00	1 50	7 50
....	...	1 75	1 67	....	$1 25	....	1 50	1 50	$2 00	...	2 00	2 00	
....	....	1 50	....	....	....	....	1 25	1 10	1 10	...	3 00	2 00	
1 50	....	2 00	....	1 25	....	1 35	....	1 25	....	...	3 00	1 25	
1 50	....	1 50	....	1 30	...	1 30	....	1 25	1 25	...	2 00	1 50	
1 75	.. .	2 00	80	....	1 30	....	1 25	....	....	...	2 75	1 25	
1 10 to 1 45	60 & 80c	†$55	1 62	1 35 1 40 1 45	....	1 45	....	1 15	1 10	60c. and 80c.	....	1 58	
2 06	....	2 00	....	1 25	....	....	1 25	1 50	1 50	...	3 50	1 75	
1 62½	....	2 00	....	....	1 00	1 50	1 25	1 25	....	...	3 00	1 50	
1 49	45c.	1 52	1 48	....	....	1 59	....	1 23	1 09	...	4 50	1 32	
1 75	75c.	1 60 & 2 00	....	....	....	1 75	....	1 30	...	..	3 80	2 00	
1 30	....	1 30	1 45	1 15	1 00	1 40	....	1 13	1 13	...	2 90	1 75 & 2 00	5 00

COAL, BITUMINOUS—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys
Somerset county :									
Cumberland and Elk Lick Coal Co.,	69	4	73	10	250	. . . .	$1 50	$1 25	. . . .
Berlin,	16	. . .	16	9	200	$1 00 1 25	1 25	1 00	. . . .
Keystone,	105	5	110	8	216	80 1 60	. . . .	1 00	. . . .
Cumberland Mines,	30	. . .	30	10	175	. . .	. . . .	. . . .	. . . .
Buffalo Creek,	11	2	13	. . . .	210	1 20	. . . .	1 50	. . . .
Boleman Mines,	2	. . . .	2	. . . .	. . . .	†35 †40			
	233	11	244						
Tioga county :									
Fall Brook,	129	8	137	. . . .	8, 9, & 12 mos	2 25	. . . .	1 25 to 1 50	. . . .
Morris Run,	276	138	414	. . .	. . . .	2 25	. . . .	1 30	. . . .
Blossburg Coal Company,	670	61	731	10	. . . .	. . . .	70	1 30	$0 70
Antrim,	312	7	319	. . . .	12 mos	2 25	1 80	1 00 to 1 25	. . . .
	1,387	214	1,601						
Venango county :									
Maple Grove Mines,	38	2	40	9	3 3	†65 †70	. . . .	1 25	. . . .
Cranberry Coal Mines,	30	. . . .	30	10	. . . .	†75 †90	1 25	. . . .	. . . .
Woods,	2	. . .	2	8	42¼	. . . .	1 50		
Teil & McDowell,	16	. . . .	16	8	138	1 75	. . . .	1 75	. . . .
	86	2	88						
Washington county :									
Joseph Garrow,	13	2	15	10	300	75 1 50			
Robbin's Block Coal Mines,	127	. . . .	127	10	250	. .	1 50	1 40	. . . .
Blackburn & Mort,	50	6	56	. . . .	200	2 00	. .	2 00	. . . .
Walnut Hill,	93	7	100	10	153	. . . .	1 50	1 40	75
Midway Block Coal Mines,	67	13	80	10	77	. . . .	. . . .	1 35	. . . .
Enterprise Coal Mines,	23	. . . .	23	10	300	1 00	. . . .	1 25	. . . .
Stockdales,	70	. . . .	70	8	190	*2½	. . . .	2 00	. . . .
Knob Coal Works,	33	10	43	10	205	. . . .	. . . .	1 75	. . .
J. S. Neel,	96	. . . .	96	10	220	. . . .	. . . .	1 50	. . . .
	572	38	610						
Westmoreland county :									
Saltsburg Coal Company,	67	4	71	10	300	. . . .	†40	1 50	1 00
Lynch & Robinson,	73	2	75	10	100	. . . .	. .	2 00	1 00
Penn Gas Coal Company,	827	23	850	10	180	1 82	1 82	1 10	. . . .
Youghiogheny,	50	. . . .	50	10	26	. . . .	. . . .	1 25	. . . .
Isabella Coke Works,	126	. . . .	126	10	300	1 60	. . . .	1 40	. . . .
Buckeye Mines,	35	. . . .	35	8	283	1 57	. . . .	1 57	. . .
Millwood Shaft,	65	5	70	10	200	. . . .	. . . .	1 00	. . . .
American Coal and Coke Works,	12	. . . .	12	9	257				
White Ball,	98	2	100	10	100	1 80	. . . .	. . . .	1 80
Leechburg,	48	7	55	8	260	†50	. . . .	1 40	. . . .
Shafton,	55	. . . .	55	. . . .	300	†50	. . . .	1 25	. . . .
Emma Mines,	21	5	26	9	300	1 66⅔	1 25	. . . .	70
Greensburg Mines,	33	. . . .	33						
Union Coal Works,	65	. . . .	65	10	125	.	. . . .	1 50	. . . .
Eureka Mines,	37	4	41	. . . .	234	1 80	. . . .	1 00	. . . .
Westmoreland Coal Company,	432	. . . .	432	10	300	1 60	. . . .	1 15 & 1 25	. . . .
J. W. Clarke,	44	. . . .	44	10	120	2 00	. . . .	1 75	. . . .
	288	52	2,140						

WAGES—*Continued.*

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
$1 75	....	$1 75	....	....	....	....	$1 25	$1 25	....	..	$4 00	$1 50	
1 00	....	....	....	....	....	$1 00	...	....	....	....	1 66		
1 00	....	1 50	....	....	....	1 00	....	1 25	..	....	‡75 00	1 50	
....	....	..	....	....	...	1 50	....	1 00					
....	....	....	....	....	$0 33	....	33	....	....	....	2 00		
....	$0 50	1 25	$1 50	....	....	1 00	...	1 25	$1 00	...	‡125 00	‡45 00	
		to				&			to				
		1 80				1 35			1 25				
2 00	....	1 80	1 90	....	....	1 35	....	1 25	1 10	...	3 25	2 00	
1 40	....	1 80	....	$2 00	....	1 60	1 13	1 30	1 30	$1 00	2 00	1 75	
....	50	1 50	1 50	....	....	1 00	...	1 25	1 00	...	‡125 00	‡45 00	
		&				to			to				
		1 75				1 35			1 25				
1 50	....	2 00	2 00	1 50	....	1 50	...	1 25	....	....	....	1 25	$2 10
....	....	1 54	....	....	....	75	....	....	30	...	2 00	2 00	
1 75	....	1 75	1 75	1 75	....	1 75	....	1 75	1 75	...	1 75	1 75	
1 25	....	2 00	1 75	1 50	....	1 50	..	1 40	....	...	3 00	2 25	
..	....	2 00	....	....	....	1 75	....	1 75	....	...	2 50	2 00	
1 50	50	2 25	1 75	....	....	1 50	1 00	....	....	...	2 50	2 00	
1 50	....	....	1 75	....	1 00	....	1 25	1 35	....	...	3 00	1 40	
....	1 00	1 50	...	....	....	1 25	....	1 00	....	...	2 00	1 25	
..	....	....	....	....	....	2 00	....	....	....	...	2 50	2 00	
1 75	50	....	....	....	....	....	....	..	....	...	....	1 75	
1 50	....	2 25	2 75	....	....	1 75	....	1 75	....	...	4 00	2 50	
1 75	....	3 00	....	1 75	....	1 75	....	1 75	1 00	...	....	2 00	
2 00	..	....	....	1 75	....	1 75	....	....	....	...	2 25	2 00	
1 35	70	1 50	....	....	....	1 55	...	1 25	....	...	2 50	1 40	‡56 00
1 35	....	1 00	....	....	....	1 50	....	....	....	...	2 00	1 25	
1 40	....	2 00	2 00	1 65	....	1 65	....	1 90	....	...	4 00		
1 57	....	1 57	....	1 75	....	1 75	....	....	....	...	1 75		
1 25	....	1 25	....	...	....	1 25	....	....	....	...	1 80		
....	....	....	....	....	....	....	1 20	....	1 20	...	....	1 80	
1 40	....	....	1 60	....	....	1 50	1 00	1 40	....	...	1 60	1 60	
1 25	....	1 75	....	....	....	§4¼	....	....	....	...	3 00	1 25	
....	....	2 00	....	1 65	....	1 75	....	....	....	...	2 00	....	5 00
...	....	....	....	....	...	2 00	....	....	....	...	2 50	2 25	
....	....	1 50	1 50	1 25	....	1 25	....	....	....	...	....	1 25	
1 35	....	1 50	....	1 25	....	1 45	....	....	....	...	2 25	1 50	
&		&		&		&					&	&	
1 60		2 00		1 45		1 60					3 00	2 00	
1 75	...	....	....	....	....	1 75	....	....	....	...	....	1 75	

COKE.

The manufacture of coke from bituminous coal is becoming one of the great industries of Pennsylvania, and whatever is calculated to throw light upon the subject is sought eagerly by those engaged in mining or the production of iron and steel.

It is claimed by those who have used it extensively, that coke made from bituminous coal is superior to charcoal or anthracite when used in the production of iron and steel. Without venturing an opinion in the matter, we would most respectfully call the attention of our iron and steel producers to this subject. We append a draught of Beehive coke ovens, recently erected at Bennington, Pennsylvania, by the Cambria Iron Company, together with explanatory observations and remarks by John Fulton, E. M., general mining engineer for the Cambria Iron Company, in relation to their mechanical construction, which we believe will be read with interest.

In 1875, he prepared for this bureau an elaborate statement of the comparative use of coke in the manufacture of iron, which was published in the report of the bureau for the year 1874–5. In that statement he gave the public the benefit of his experiments, which have proved of great value to our bituminous coal regions, and attracted the attention of the scientific men of this and other countries. Did space permit, we would re-produce the article of Mr. Fulton's in its entirety in this report, in order to place the very valuable information it imparts upon the subject of coking again before the public. But we must content ourselves with one extract, viz:

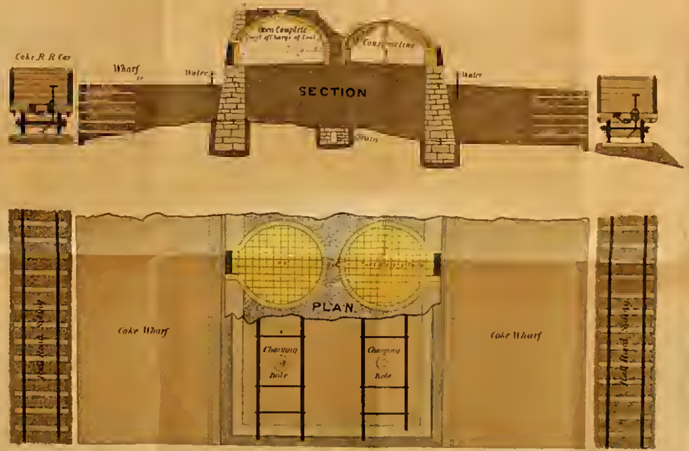
"*It is also manifest that coke is destined to become the leading fuel for blast furnaces; and to retain this position from its almost inexhaustible source of supply, its calorific efficiency and its continued economy.*"

BEEHIVE COKE OVENS.

By JOHN FULTON, E. M., *General Mining Engineer, C. I. Co.*

During the past year the Cambria Iron Company has had a bank of one hundred *Beehive coke ovens* constructed at Bennington shaft colliery, for the purpose of making coke to supply its five blast furnaces, east of the Allegheny mountain.

PLAN, ELEVATION AND DETAILS OF BEEHIVE COKE OVENS AT BENNINGTON SHAFT
1878



These coke ovens are located a short distance east of the eastern portal of the Allegheny tunnel of the Pennsylvania railroad.

The bank of ovens is 750 feet long, with ample wharf and railroad siding on each flank. The coal is received from the Miller seam, (B,) of the Bennington shaft mine.

A large dump has been erected, in connection with the shaft tower of the mine, capable of holding three day's supply of coal, and of sufficient height to discharge its coal into larries on tracks underneath. These larries receive five tons each, and discharge it through their hopper into the coke ovens.

The accompanying drawings will show in detail the plan of construction of these ovens. Many valuable suggestions were obtained from gentlemen engaged in the Connellsville coke trade, who afforded the writer every facility, in the most cordial manner, of studying at their extensive coke works, the requirements of ovens as indicated by the work and experience of many years.

The Bennington coke ovens are placed in a double row, inclosed between two strong retaining walls of sandstone masonry. Between these walls and up to the level of the floors of the ovens, the space has been carefully filled and compactly rammed with clay and loam, constructed in horizontal layers of twelve inches each. Under all, an ample drain is laid longitudinally under the bank of ovens.

The ovens were founded on this thoroughly packed filling, having a fall in their floors toward the doors of six inches to each oven.

The ovens were constructed with nine inch fire-brick of three distinct shapes, as shown in the drawing.

The order of the work of construction consisted in four consecutive operations:

1st. The setting up on front walls of the iron door frames, with the necessary anchors built up with the shaped jamb brick.

2d. The building of the vertical circular section to the springing of arch of dome—the circular line of oven being preserved by a wooden sweep, pivoted on a pin in center of oven.

3d. The laying of the three inch floor tiles and the erection of the wooden centers to build dome of ovens. These wooden centers consist of seven sections made of boards and lathe, which are shaped and fit together like the sections of an orange, when cut by a plane at right angles to its stem line. These sections are supported at this base by small benches, easily adjustable, and supported under crown by a single post, capped by a circular collar. The sections were made of a size to be easily taken out through the oven doors. They were made by Mr. McLanahan, of Hollidaysburg, Pennsylvania, and were found accurate and valuable in building the domes of the ovens.

The 4th operation consists in building the dome, which is completed by wedging in carefully and firmly the annular charging ring, which becomes a keystone of the arch as well as the charging hole of the oven.

The filling in around ovens, or backing, should follow the progress of the brick work as closely as possible; the material laid down in horizontal layers of twelve inches deep, and carefully rammed.

The track on top of ovens is laid with iron tie pieces, and has a gauge of six feet to allow space for larrie containing five tons of coal.

The water for quenching the coke is supplied in three inch cast-iron pipes, with taps and hose between ovens.

The ovens were erected rapidly and carefully under the superintendence of Mr. V. C. Elder, of Johnstown, and were put in blast October 8, 1878.

They have been working satisfactorily since. In relation to their work, Mr. John McFadyen, superintendent of coke ovens, reports, that during the months of December and January last, 10,223 tons of coal have been coked; yielding, 6,548 tons of coke. This shows a yield, even in the winter months, of 64.05 per cent. of coke, and, it is believed, assures an average annual yield of 65 per cent.

The analysis of the Miller (B) Bennington coal, as determined by T. T. Morrell, Esquire, chemist, Cambria Iron Company, is as follows:

Fixed carbon,	68.50
Ash,	8.00
Volatile matter,	22.38
Sulphur,	1.12
	100 00
Coke,	76.00

A yield of 65 per cent. indicates a loss of carbon of 9.7 per cent. only, which shows commendable economy in the work of these ovens. In this respect it is interesting to compare the loss of carbon in coking this coal by the three typical methods:

In pits or mounds,	59 per cent. coke,	loss carbon, 22.0 per cent.
In Beehive ovens,	65 per cent. coke,	loss carbon, 9.7 per cent.
In Belgian ovens,	70 per cent. coke,	loss carbon, 8.0 per cent.

The pits or mounds are the slowest in time and the most wasteful of coal. The Beehive ovens make the best and driest coke, but are not yet so economical in their work as the Belgians. In time of making coke they are about equal.

The actual cost of making coke per ton by these methods, at present cost of labor, including interest on investment in ovens, is as follows:

Pits or mounds,	70⅓ cents.
Beehive ovens,	35 cents.
Belgian ovens,	33 cents.

In this stage of the investigation of the methods of making coke for blast furnace use, it is important to bear in mind that the imperative requirement is *the production of the best quality of coke for furnace use.* This must be the prime factor in all successful coking operations. The mere effort to save a few units of carbon in the coking, to waste a great many in the furnace, besides reducing its product, seems to be only trifling with a very important industrial question. For instance: a furnace that used $1\frac{80}{100}$ tons of Belgian and pit coke mixed in making one ton of pig iron, required only $1\frac{22}{100}$ tons of Bennington beehive coke in doing the same work, under precisely the same conditions of work and weather. This exhibits a loss of fifty-eight one hundredth ton of coke to each ton of pig metal produced, which in a large make would be quite serious.

Careful investigations of the several methods of coking indicate very decidedly the superior value of the beehive plan. It seems to be pretty clearly made out, that this is the true fundamental principle of coking. In this connection it may be asked why cannot coal be coked with as little loss of carbon in the beehive as in the Belgian or Appolt plan of ovens? The correct reply to this would disclose the true line of progress demanded in beehive ovens. *The production of the best possible furnace coke, with the least possible waste of carbon.*

It is evident that a great waste of heat is induced in the present plan of beehive ovens. The only surprise is that the system is not much more wasteful. The heated products of coking are driven directly out of the oven through the charging holes into the open air. The Belgians, on the other hand, are enveloped in flues and ports, utilizing, as much as possible, the heat evolved in coking. Their rapid system of discharging the coke retards the work of the oven very little, whilst the beehive, quenching its coke in oven, is much cooled by the operation, besides a loss of time in drawing the coke, of two to three hours. Yet, under all these disadvantages, the beehive ovens will make coke of a better quality than the Belgians or Appolt ovens.

During the progress of the construction of the Bennington ovens, Mr. McFadyen suggested a plan of adding flues to the beehive oven. The heat is received by ten ports, near crown of oven dome, and carried down outside in buttressed flues and conveyed under the floor of oven in radial flues, discharging into a short chimney, regulated by a damper.

Careful experiments in this oven show a decided *saving of time in coking.* At present this is estimated at thirty-three per cent. That is, a bank of two hundred ovens with flues would produce as much coke as a bank of three hundred ovens without flues.

In the erection of banks of ovens of beehives with flues, it is contemplated to introduce an elliptical flue between the backs of ovens, with ports to receive the heated products.

Mr. M. F. Overholt, of Mt. Pleasant, Pennsylvania, in the Connellsville coke region, also submitted an improvement to compensate for the loss of time in the quenching of coke and drawing involved in the Beehive ovens. He has introduced a connecting flue between the ovens, regulated by a damper, so that, on drawing a charge of coke, the ports into adjoining ovens can be opened and a supply of their heat obtained to assist the drawn oven in regaining its heat. This application would be important in ovens where coals are coked possessing a small volume of volatile matter.

The cost of beehive ovens, in favorable situations, should not exceed two hundred dollars each; but, where deep embankments are required, a largely increased outlay will be demanded. The flued beehive oven of Mr. McFadyen would probably cost fifty dollars more than common unflued ovens.

The fire-brick, tiles, and shaped brick for the Bennington bank of ovens were made by A. J. Haws, of Johnstown, and W. R. Miller, of Sandy Ridge, Centre county, Pennsylvania.

It is very remarkable, that after long continued efforts in elaborating complicated coke oven appliances, that the ultimate analyses of the value of the methods should evolve the merits of the simple plan of the beehive ovens of fifty years ago.

There is no doubt that particular varieties of coking coals require special treatment, but underneath all this lies the important consideration, whether it is a correct business principle to attempt the coking of a coal that requires so complicated appliances. and which, after all, produces an inferior coke. It would appear that in the State of Pennsylvania, possessing so ample supplies of good coals for making coke, that an intelligent selection of such coals is the first and important consideration in coking operations, rather than the attempt, however ingenious, of designing ovens to make inferior coke from coals normally unfit for this special purpose.

JOHNSTOWN, *February 22, 1879.*

ANTHRACITE COAL STATISTICS.

SCHULYKILL COUNTY.

Cuyler.

S. M. Heaton & Co., Raven Run, Schuylkill county.

Mine located at Raven Run, Schuylkill county.

Quantity of tons, and value in dollars of annual product, 78,926 tons.

Whole number of persons employed, 265.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract,	120	. . .	$1 75	. . .	8	162½	
Outside laborers,	25	. . .	. . .	. . .	10	162½	
Inside laborers,	5	. . .	1 25	. . .	9	162½	
Outside mechanics,	7	. . .	1 37	. . .	10	162½	
Inside mechanic,	1	. . .	1 50	. . .	10	162½	
Outside mule drivers,	3	. . .	1 25	. . .	10	162½	
Inside mule drivers,	12	.	1 50	. . .	9	162½	
Slate pickers,	. . .	90	. . .	$0 50	. . .	162½	
Mining overseer,	2	. . .	3 00	. . .	. . .	300	

S. M. HEATON & CO.

Koh-i-noor.

Richard Heckscher, Shenandoah, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 112,000 tons; value at breaker, $151,200.

Whole number of persons employed, 330.

Amount of capital employed in business, $300,000.

Amount paid annually for wages of employés, $95,200.

Amount paid for materials used in business, $22,400.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	120	. .	$2 30	. . .	8	152 days.	Value of product is given at the breaker, and includes rental paid lessors—a royalty of about twenty-five cents per ton.
Miners on wages,	18	. .	1 70	. . .	9		
Outside laborers,	22	. .	1 25	. . .	10		
Inside laborers,	30	. .	1 38	. . .	9		
Outside mechanics,	11	. .	1 75	. . .	10		
Inside mechanics,	2	. .	1 75	.	12		
Outside mule drivers,	3	1	1 25	$0 80	10		
Inside mule drivers,	14	6	1 35	1 00	9		
Slate pickers,	30	60	80	60	10		
Mining overseers,	2	. .	4 00				
Mining engineer,	1	.	200 00	. .	. . .		Per annum.
Door boys,	. . .	10	. . . .	70	9		

REMARKS.—Located in the borough of Shenandoah, in the heart of, perhaps, the finest basin of anthracite coal yet discovered. Our colliery has acquired an enviable reputation for the quality of the coal mined, as well as for its preparation. Everything is in thorough order, and all the openings have been made. The coal is brought to the bottom of the shaft from two self-acting planes and one slope, operated by compressed air; another slope is now finished inside, and will be in operation early next year. The power will be supplied by a second pair of air compressors, located on the surface; no steam being used in the mines. The coal is hoisted from the bottom of the shaft 450 feet perpendicularly by patent self-dumping cages, dumping the coal at an angle of ninety degrees out of cars, which have no doors, into the breaker chutes. No ticket bosses, dumpers, or tipmen are required. All the water is hoisted in large boiler-shaped tanks—no pumps being used.

During the year 1878, our shipments have been materially curtailed by the board of control of the anthracite coal regions, and have been still further reduced by an improper distribution of cars at the hands of the Philadelphia and Reading Railroad Company, who, being miners and transporters at the same time, cannot be relied upon to avoid discrimination. No strike or serious accidents have occurred to delay operations, yet, in consequence of the restriction enforced, we have been unable to work more than half time. Present capacity, 900 tons per day; number of engines, 15; aggregate horse power, 907; number of boilers, 19; aggregate horse power, 950; mules and horses, 36; one locomotive for hauling dirt; aggregate length of wire rope used, 7,000 feet; aggregate length of railroad, single track, almost entirely under ground, 5½ miles. Shipments in 1877, 162,000 tons.

RICHARD HECKSCHER & CO.

SHENANDOAH, *November 30, 1878.*

Glendon Lehigh Colliery.

J. C. Haydon & Co., Mahanoy City, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 43,800 tons; $76,650, including royalty.

Whole number of persons employed, 235.

Amount of capital employed in business, about $50,000.

Amount paid annually for wages of employés, $40,500.

Amount paid for materials used in business, about $15,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	85	. .	$1 00 to 4 50	. . . .	8	Breaker worked 90 days.	Wages are paid on sliding scale, according to the price of coal. The highest and lowest wages are given.
Miners on wages,	3	. .	1 55 to 1 75	. . . .	10		
Outside laborers,	18	3	1 08 to 1 35	$0 83 to 1 12	10		
Inside laborers,	40	. .	1 33 to 1 50	. . . .	10		
Outside mechanics,	2	. .	1 60 to 2 00	. . . .	10		
Inside mechanics,	2		1 60 to 1 80	. . . .	10		
Outside mule drivers,	.	8	. . . .	80 to 90	10		
Inside mule drivers,	5	4	1 33 to 1 50	1 00 to 1 35	10		
Engineers,	4	.	1 50 to 1 80	. . . .	12		
Firemen,	2	. .	1 33 to 1 50	. . . .	12		
Slate pickers,	10	35	80 to 90	30 to 75	10		
Mining overseers,	2						
Door boys,	. .	12	. . . .	53 to 60	10		

REMARKS.—The production of this colliery has been limited this year by a small allotment, which, under the restriction of the board of control, has reduced our production to about one third of our capacity. The characteristics of colliery were given in last report, and have not changed.

J. C. HAYDON & CO.,
T. N. PATTERSON,
Superintendent.

Cambridge.

Cambridge Coal Company, Shenandoah, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 5,000 tons.

Whole number of persons employed, 27.

Amount of capital employed in business, $6,000.

Amount paid annually for wages of employés, $5,217.

Amount paid for materials used in business, $840.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	12	. . .	. . . .	. . .	. .	145	
Miners on wages, . .	2	. . .	$11 70 ꝑ week.	. . .	10		
Outside laborers, . .	2	. . .	8 00 ꝑ week.	. . .	10		
Inside laborers, . . .	2	. . .	10 20 ꝑ week.	. . .	10		
Outside mechanics, . .	2	. . .	12 00 ꝑ week.	. . .	10		
Inside mule drivers, .	2	. . .	10 20 ꝑ week.				
Slate pickers, ...	. . .	3	. . . .	$3 75	10		
Coal haulers, ...	2	. . .	. . . .	. . .	. . .	. . .	By contract.

CAMBRIDGE COAL COMPANY.

Ellsworth.

John R. Davis, Broad Mountain, Schuylkill county.

Mine located at New Castle, Schuylkill county.

Whole number of persons employed, 63.

Amount of capital employed in business, $12,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	25	. . .	$1 75	. . .	8	176	
Outside laborers, . . .	10	. . .	1 00	. . .	10		
Inside laborers, . . .	6	. . .	1 25	. . .	9		
Outside mechanics, . .	2	. . .	1 50				
Outside mule drivers,	. .	2	. . .	$0 80			
Inside mule drivers, .	. . .	2	. . .	80			
Slate pickers, ...	. . .	15	. . .	50			
Mining overseer, . . .	1	. . .	4 00				
Outside overseer, . .	1	. . .	2 50				

William Penn Colliery.

E. & G. Brooke, owners, worked under the name of William Penn Coal Company, Mahanoy Planes, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 123,000 tons.

Whole number of persons employed, 300.

Amount of capital employed in business, $300,000.

Amount paid annually for wages of employés, about $150,000.

Amount paid for materials used in business, about $50,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	80	. . .	$2 00	. . .	8	160	
Miners on wages, . .	12	. . .	1 65	. . .	8		
Outside laborers, . . .	20	. .	1 25	. . .	10		
Inside laborers, . . .	50	30	1 40	$1 00	10		
Outside mechanics, . .	10	. . .	2 00	. . .	10		
Inside mechanics, . .	2	. . .	2 00	. .	10		
Outside mule drivers,	. . .	8	. . .	1 00	10		
Inside mule drivers, .	. . .	11	. .	1 25	10		
Dumpers, ...	. .	5	. . .	1 50	10		
Slate pickers, ...	20	50	. .	1 00	10		
Mining overseer, . . .	1	. .	4 00	. . .	10		

REMARKS.—One shaft on the mammoth vein. Capacity of works, 1,000 tons per day. Shaft, 300 feet deep.

W. H. LEWIS, *Supt.*

Staffordshire.

Jones, Ward & Co., Mahanoy City, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 8,811 tons; $16,290 50.

Whole number of persons employed, 30.

Amount of capital employed in business, $12,000.

Amount paid annually for wages of employés, about $8,500.

Amount paid for materials used in business, about $7,721 ; this includes rent and lateral tolls.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	17	. .	About $1 80	. . .	10	$152\frac{3}{4}$	This is the number of days the colliery worked, but most of our employés worked when the colliery did not.
Outside laborers, . . .	3	. .	1 33	. . .	10		
Inside laborer, ...	1	. .	1 80	. . .	10		
Outside mechanic, . .	1	. .	2 00	. . .	10		
Inside mule drivers, .	2	. .	1 25	. . .	10		
Slate pickers, ...	6	. .	. . . .	$0 70	10		

JONES, WARD & CO.

Bear Run.

Wiggan & Triebles, Mahanoy City, Schuylkill county.

Mine located in East Mahanoy township, Schuylkill county.

Quantity of tons and value in dollars of annual product, 57,654$\frac{8}{20}$ tons; $111,138 50.

Whole number of persons employed, 196.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $71,540 37.

Amount paid for materials used in business, $17,998 50.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	44	. . .	$2 38	. . .	8	During the year so many changes and so much broken time, that it cannot be correctly stated.	
Miners on wages, . . .	6	. . .	$2 50 basis.	. . .	8		Taking July, August, September, and October.
Outside laborers, . . .	20	57	1 50 to 2 16	66c. to $1 16	10		
Inside laborers	38	4	1 70 to 185	71	10		
Outside mechanics, . .	4	. . .	1 at 2 00 3 at 2 25	. .	10		
Repair men, ...	3	. . .	1 at 1 85 2 at 2 00				
Watchman, ...	1	. . .	36 00 per mo.				
Outside mule drivers,	. . .	5	. . . . . .	1 00	10		
Inside mule drivers, .	5	. . .	1 63	. . .	10		
Loader bosses, ...	2	. . .	12 00 per w'k.				
Engineers, ...	2 1	. . . . . .	55 00 per mo. 10 00 per w'k.				
Stable man, outside, .	1	. . .	40 00 per mo.				
Slate pickers, ...	. . .	*57					
Mining boss, ...	1	. . .	†$100 per mo.				
Breaker boss, ...	1	. . .	†$70 per mo.				
Engineer, (breaker,) .	1	. . .	12 00 per w'k.				
Jigman, ...	1	. . .	12 00 per w'k.				
Stable man, inside, . .	1	. . .	12 00 per w'k.				Full time to Nov. 30, '78.

*Stated above, which includes some large boys, doing other work around breaker.

† House rent and fuel included.

PHILIP CONRAD,
Superintendent.

York Farm Colliery.

Job Rich, Pottsville, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 1,125 tons; value, $2,250.

Whole number of persons employed, 6.

Amount of capital employed in business, $2,500.

Amount paid annually for wages of employés, $1,703.

Amount paid for materials used in business, $260.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	. . .	. . .	$6 41	. . .	10	11 mos.	
Miners on wages, . .	2	. . .	2 49				
Outside laborers, . . .	2	. . .	1 83				
Inside laborers, . . .	1	. . .	92				
Outside mechanics, . .	1	. . .	1 17				

REMARKS.—The amount in this report paid for materials does not include all, for there were damages from the explosion of the powder magazine, which are not in, and the rent is also left out. The expenses in the coal trade just now are too heavy to make anything with the present price of coal.

JOB RICH,
Per J. N. R.

St. Nicholas Colliery.

St. Nicholas Coal Company, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons of annual product, 63,134$\frac{11}{20}$ tons.

Whole number of persons employed, 185.

Amount paid annually for wages of employés, $57,308 97.

Amount paid for materials used in business, $16,200 49.

Miners on contract, 44, earning from $1 50 to $3 per day; miners on wages, 6, (skippers,) earning $2 50 per day, on basis; outside laborers, 20, ranging from $1 35 to $1 58 per day, on basis; inside laborers, 26, (bosses, starters, drivers, loaders, and repair men,) earning from $1 70 to $2 13$\frac{1}{3}$ per day, on basis; door-tenders, 4 boys, earning from 66 cents to $1 21$\frac{2}{3}$ per day, on basis; outside mechanics, 5, ranging from $2 to $2 16 per day, on basis; inside mechanics, 2, earning $1 25 and $2 33 per day, on basis; outside mule drivers, 5, earning $1 33 to $1 41$\frac{2}{3}$ per day, on basis; inside mule drivers and outside firemen, 2, earning $1 83 on basis; dumper, 1, earning $1 75 per day, on basis; slate picker bosses, 4, earning from $1 50 to $1 66 per day, on basis; slate pickers, 66, earning from 50 cents to $1 per day, on basis; mining overseer, 1.

REMARKS.—The average percentage taken for year, was 14 per cent. All day's work consist of ten hours. In operation during the year, 159 days.

E. A. DENNISTON, *Supt.*

Lawrence Mine.

Lawrence, Merkel & Co., Minersville, Schuylkill county. Colliery address: Mahanoy Plane.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product: 70,477.11 tons, value, $128,608 98.

Number of persons employed, 223.

Amount of capital employed in business, $117,000.

Amount paid annually for wages of employés, $65,010 98.

Amount paid for materials used in business, $16,425 48.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	30	...	...	...	9	178¾	
Miner on wages,	6	...	$1 72⅔	...	10	178¾	
Outside laborers,	21	...	1 22⅙	...	10	178¾	
Inside laborers,	31	...	1 46	...	10	178¾	
Outside mechanics,	5	...	1 80⅙	...	10	178¾	
Firemen,	4	...	1 37	..	10	178¾	
Engineers,	8	...	1 55	...	10	178¾	
Outside mule drivers,	...	3	...	$0 93½	10	178¾	
Inside mule drivers,	...	11	..	1 07⅓	10	178¾	
Inside door boys,	...	5	...	69	10	178¾	
Shipper,	1	...	1 67	...	10	178¾	
Dumpers,	3	...	1 52½	..	10	178¾	
Slate pickers,	...	79	...	64½	10	178¾	
Mining overseers,	3	..	4 16⅔	...	..	178¾	
Fire bosses,	2	...	1 94⅓	...	10	178¾	
Bin loaders,	2	..	1 84⅙	...	10	178¾	
Starters,	7	...	1 58⅓	...	10	178¾	
Breaker boys,	1	...	2 25	...	10	178¾	
Stable boys,	1	...	1 44	..	10	178¾	

LAWRENCE, MERKEL & CO.

Draper Colliery.

"Draper Colliery," not a corporation.

Gilberton, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 58,879$\frac{19}{20}$ tons; value, $90,000.

Whole number of persons employed, 217, on an average.

Amount paid annually for wages of employés, $53,146 71.

Amount paid for materials used in business, $18,189 52.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	29	. . .	$2 55	. . .	8	152	
Miners on wages,	13	. .	1 73	.	.	150	
Outside laborers,	35	3	1 26	$0 86	10	129$\frac{3}{4}$	
Inside laborers,	38	. . .	1 52	. .	10	129$\frac{3}{4}$	
Outside mechanics,	10	. . .	1 64	. . .	10	264	
Inside mechanics,	3	. .	2 20	. . .	10	264	
Outside mule drivers,	. . .	4	. . .	93	10	129$\frac{3}{4}$	
Inside mule drivers,	3	5	1 46	1 15	10	129$\frac{3}{4}$	
Inside door boys,	. . .	4	. . .	93			
Dumpers.	2	. .	1 16	. . .	10	129$\frac{3}{4}$	
Slate pickers,	10	54	1 08	58	10	129$\frac{3}{4}$	
Mining overseer,	1						
Outside overseer,	1						
Clerk,	1						
Superintendent,	1						

DRAPER COLLIERY,
Per H. L. WILLIAMS

Kehley's Run.

Co-partnership, under name of Thomas Coal Company, Philadelphia.

Mine located in Shenandoah, Schuylkill county.

Quantity of tons, and value in dollars of annual product, 99,070$\frac{6}{20}$ tons : $145,605 35.

Whole number of persons employed, 427.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $89,670 26.

Amount paid for materials used in business, $18,649 26.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	50	. . .	$2 10	. . .	10	172½	
Miners on wages, . . .	58	. . .	1 75	. . .	10		
Outside laborers, . . .	55	. . .	1 40	. .	10		
Inside laborers, . . .	66	. . .	1 49	. . .	10		
Outside mechanics, . .	11	. . .	1 77	. . .	10		
Inside mechanics, . .	4	. . .	1 95	. . .	10		
Outside mule drivers,	. . .	5	. . . .	$0 75	10		
Inside mule drivers, .	11	. .	1 49	. . .	10		
Slate pickers, ...	. . .	158	. . . .	67	10		
Mining overseers, . .	4	. . .	. . . .	. . .	10		
Civill engineer, . . .	1	. . .	. . . .	. . .	10		
Clerks, ...	3	. . .	. . . .	. . .	10		

ROB. C. THOMAS, *President.*

Gilberton.

The Gilberton Coal Company, Gilberton, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 55,813$\frac{12}{20}$ tons; value, $90,000.

Whole number of persons employed, 209.

Amount paid annually for wages of employés, $48,385 59.

Amount paid for materials used in business, $11,275 64.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	20	. . .	$2 71	. . .	9	145	
Miners on wages, . . .	18	. . .	1 73	. . .	10	145¼	
Outside laborers, . . .	35	. . .	1 26	. . .	10	145¼	
Inside laborers, . . .	33	. . .	1 52	. . .	10	145¼	
Outside mechanics, . .	8	. . .	1 64	. . .	10	258	
Inside mechanics, . .	4	. . .	2 07	. . .	10	341	
Outside mule drivers,	. . .	5	. . .	$0 93	10	145¼	
Inside mule drivers, .	3	6	1 46	1 15	10	145¼	
Inside door boys, . . .	. . .	4	. . .	93	10	145¼	
Dumpers, ...	2	. . .	1 26	. . .	10	145¼	
Slate pickers, ...	19	48	1 08	58	10	145¼	
Outside overseer, . . .	1	. . .	. . .	. . .	. . .	. . .	
Mining overseer, . . .	1	. . .	. . .	. . .	. . .	. . .	
Superintendent, . . .	1	. . .	. . .	. . .	. . .	. . .	
Clerk, ...	1	. . .	. . .	. . .	. . .	. . .	

REMARKS.—This colliery passed into the hands of the land owners, December 1, 1878.

H. L. WILLIAMS.

Middle Lehigh.

Middle Lehigh Coal Company, Mauch Chunk, Carbon county.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 61,106$\frac{13}{20}$ tons; worth about $90,500.

Whole number of persons employed, 400.

Amount of capital employed in business, about $100,000.

Amount paid annually for wages of employés, $64,187 10.

Amount paid for materials used in business, $14,328 65.

Remarks.—The colliery was idle during January and February, owing to low price of coal, and during part of September, and all of October, November, and December, owing to a strike of miners for an advance of ten per cent. over what our neighbors were paying. The price of coal would not warrant any such advance, and the colliery remained idle.

Total number of days worked, 79.

T. FRANK WALTER, *Treas. and Secy.*

Kalmia Mine.

John Phillips and W. H. Sheafer, as Phillips & Sheafer, Orwin, Schuylkill county.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 94,912 tons 11 cwt.; value, $164,811.

Whole number of persons employed, 284, average.

Amount of capital employed in business, $160,000, in working capital and improvements.

Amount paid annually for wages of employés, $80,080 40.

Amount paid for materials used in business, $22,400 09.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	93	. .	$1 85½	. . .	10 hours constitute the basis for one day's work.	172	Average.
Miners on wages, . .	6	. . .	1 69	. . .		277	
Outside laborers, . . .	25	. . .	1 15	. . .		219	
Inside laborers, . .	66	. . .	1 47	. . .		225	
Outside mechanics, . .	6	. . .	1 61	. . .		286	
Inside mechanics, . .	2	. . .	1 69			264	
Outside mule drivers, .	. . .	6	. . .	$0 63		211	
Inside mule drivers, .	. . .	13	. . .	92		194	
Stable, ...	1	. . .	1 44	. . .		1 year	
Slate pickers, . . .	. . .	58	. . .	54		191	
Mining overseers, . .	4	. . .	3 81	. . .		1 year	
Door tenders, ...	. . .	4	. . .	67		185	

REMARKS.—The number of miners on contract varied with each month in the year, the lowest being 37, in January, and highest, 128. Ninety-three is the average number for the year. Their average of daily wages is obtained by dividing the total net earnings, by the total number of days worked on contract. This average would have been higher, but for the scarcity of Reading railroad cars. Many days the breaker worked but half day. Shipments were made 194 days.

The number of men and boys on wages varied very little throughout the year, and I have taken June as a fair average of the number. The amounts paid annually for wages of employés and materials used in business, are taken from the pay-roll for expenses at the colliery only. The value in dollars of the annual product is calculated from the shipping point—Pine Grove. Out of this amount, come royalties, lateral tolls, and commissions.

THOMAS H. PHILLIPS, *Supt.*

Anchor.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Whole number of persons employed, 2.

Amount paid annually for wages of employés, $1,091 13.

Amount paid for materials used in business, $40 90.

Outside laborers, 1; daily wages paid men, $1 33; hours worked per day, 10; mining overseer, 1; daily wages paid men, $1 85.

ALBERT FOSTER,
Secretary.

Bast.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 86,463 tons; $135,746 91, at railroad scales.

Whole number of persons employed, 307.

Amount paid annually for wages of employés, $84,104 75.

Amount paid for materials used in business, $27,738 71.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	60	. .	$1 50 to 2 74	. . .	10	172½	Average, $1 97.
Miners on wages,	26	. . .	1 86				
Outside laborers,	34	1	1 31	$0 86			
Inside laborers,	64	8	1 58	78			
Outside mechanics,	12	. . .	1 68				
Outside mule drivers,	4	. . .	1 28				
Inside mule drivers,	11	. .	1 41				
Dumpers,	4	. .	1 22				
Slate pickers,	3	75	1 05	61			
Mining overseers,	5	. . .	2 64				

ALBERT FOSTER, *Secretary.*

Bear Valley.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 75,719 tons; $145,380 48, at railroad scales.

Whole number of persons employed, 249.

Amount paid annually for wages of employés, $69,805 58.

Amount paid for materials used in business, $16,174 93.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	60	. .	$0 67 to 2 80	. .	10	169¼	Average, $1 69.
Miners on wages,	10	. .	1 65				
Outside laborers,	21	7	1 23	$0 92			
Inside laborers,	36	2	1 37	86			
Outside mechanics,	7	. .	1 67				
Outside mule drivers,	4	3	1 43	68			
Inside mule drivers,	3	. . .	1 11				
Dumpers,	3	. . .	1 20				
Slate pickers,	. . .	89	. .	52			
Mining overseers,	4	. . .	2 72				

ALBERT FOSTER, *Secretary.*

Boston Run.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 5,878 tons; $9,228 46, at railroad scales.

Whole number of persons employed, 80.

Amount paid annually for wages of employés, $24,183 33.

Amount paid for materials used in business, $9,703 31.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	8	. . .	$1 71	. . . .	10	24¾	
Outside laborers, . . .	23	. . .	1 25				
Inside laborers, . . .	21	. . .	1 53				
Outside mechanics, . .	6	. . .	1 80				
Outside mule drivers,	3	. . .	1 35				
Slate pickers, ...	.	17	. . . .	59 cts.			
Mining overseers, . .	2	. .	3 14				

ALBERT FOSTER, *Secretary.*

Beechwood.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 75,821 tons; $119,038 97, at railroad scales.

Whole number of persons employed, 339.

Amount paid annually for wages of employés, $85,107 40.

Amount paid for materials used in business, $21,093 59.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	144	. . .	$1 07 to 2 81	. . . .	10	166¼	Average $1 68.
Miners on wages,	18	. . .	1 77				
Outside laborers,	20	5	1 30	72 cts.			
Inside laborers,	47	14	1 55	78			
Outside mechanics,	10	. . .	1 74				
Outside mule drivers,	1	6	1 50	79			
Inside mule drivers,	6	13	1 31	98			
Dumpers,	3	. . .	1 25				
Slate pickers,	. .	48	. . . .	45			
Mining overseers,	4	. . .	2 88				

ALBERT FOSTER, *Secretary.*

Buckville.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Whole number of persons employed, 1.

Amount paid annually for wages of employés, $410 40.

Outside laborers, 1; daily wages paid men, $1 33; hours worked per day, 10.

ALBERT FOSTER, *Secretary.*

Burnside.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 33 tons; not working.

Whole number of persons employed, 60.

Amount paid annually for wages of employés, $16,109 39.

Amount paid for materials used in business, $3,478 90.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on wages, . .	17	. . .	$1 65	. . .	10		
Outside laborers, . . .	13	1	1 23	99c.			
Inside laborers, . . .	19	. . .	1 35				
Outside mechanics, . .	4	. . .	1 69				
Outside mule drivers,	3	. . .	1 50				
Mining overseers, . .	3	. . .	2 84				

ALBERT FOSTER,
Secretary.

Conner.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 83,308 tons $130,793 56, at railroad scales.

Whole number of persons employed, 284.

Amount paid annually for wages of employés, $74,622 44.

Amount paid for materials used in business, $20,427 79.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	106	. .	$1 39 to 3 27	. .	10	173	Average, $1 94.
Miners on wages, . .	5	. .	1 58				
Outside laborers, . . .	30	3	1 25	90c.			
Inside laborers, . . .	27	8	1 53	65c.			
Outside mechanics, . .	8	. . .	1 61				
Outside mule drivers,	2	5	1 36	91c.			
Inside mule drivers, .	10	4	1 27	85c.			
Dumpers, ...	2	. . .	1 29				
Slate pickers, ...	. . .	72	.	63c.			
Mining overseers, . .	2	. . .	3 15				

ALBERT FOSTER,
Secretary.

Colket.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 29,860 tons; $62,108 80, at railroad scales.

Whole number of persons employed, 179.

Amount paid annually for wages of employés, $39,185 26.

Amount paid for materials used in business, $10,855 33.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during the year.	REMARKS.
Miners on contract,	59	. .	81c. to $3 16	. .	10	147¾	Average, $1 76.
Miners on wages,	8	.	1 80				
Outside laborers,	15	5	1 27	63c.			
Inside laborers,	18	7	1 57	65c.			
Outside mechanics,	7	. .	1 77				
Outside mule drivers,	1	3	1 50	77c.			
Inside mule drivers,	4	2	1 52	75c.			
Dumper,	1		1 05				
Slate pickers,	. . .	45	. .	40c.			
Mining overseers,	4	. .	2 69				

ALBERT FOSTER,
Secretary.

Ellangowan.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 14,652 tons; $23,003 64, at railroad scales.

Whole number of persons employed, 170.

Amount paid annually for wages of employés, $50,716 45.

Amount paid for materials used in business, $48,066 80.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	62	. .	$1 07 to 4 46	. .	10	25¾	Average $2 29.
Miners on wages, . . .	5	. . .	1 80				
Outside laborers, . . .	22	. . .	1 31				
Inside laborers, . . .	47	3	1 53	$0 80			
Outside mechanics, . .	10	. . .	1 70				
Outside mule drivers,	5	3	1 48	75			
Inside mule drivers, .	9	. . .	1 31				
Mining overseers, . .	4	. . .	3 02				

ALBERT FOSTER, *Secretary.*

Elmwood.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schulkill county.

Quantity of tons and value in dollars of annual product, 55,602 tons; $,87295 14, at railroad scales.

Whole number of persons employed, 196.

Amount paid annually for wages of employés, $49,049 97.

Amount paid for materials used in business, $10,491 03.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	65	. .	$0 95 to 2 89	. .	10	165¾	Average $1 72.
Miners on wages, . . .	2	. . .	1 85				
Outside laborers, . . .	17	. .	1 31				
Inside laborers, . .	28	4	1 52	$0 71			
Outside mechanics, . .	7	. . .	1 68				
Outside mule driver, .	1	3	1 50	97			
Inside mule drivers, .	7	2	1 16	94			
Dumper, ...	1	. . .	1 35				
Slate pickers, ...	. . .	57	. . .	58			
Mining overseers, . .	2	. . .	3 21				

ALBERT FOSTER, *Secretary.*

Eagle Hill Shaft.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 66,982 tons; $105,161 74, at railroad scales.

Whole number of person employed, 250.

Amount paid annually for wages of employés, $66,597 07.

Amount paid for materials used in business, $17,192 94.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	86	. .	$1 05 to 2 86	. .	10	185½	Average $1 63.
Miners on wages, . . .	6	. .	1 80				
Outside laborers, . . .	18	5	1 33	$0 77			
Inside laborers,	50	9	1 53	45			
Outside mechanics,	12	.	1 66				
Outside mule drivers,	1	2	1 35	90			
Inside mule drivers, .	1	11	1 53	97			
Dumpers, ...	3		1 22				
Slate pickers, ...	.	42	.	47			
Mining overseers, . .	4	. . .	2 59				

ALBERT FOSTER, *Secretary.*

East Franklin.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 3,016 tons; $6,273 28, at railroad scales.

Whole number of persons employed, 27.

Amount paid annually for wages of employés, $15,700 21.

Amount paid for materials used in business, $9,473 53.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	. . .	. . .	. .	. . .	. . .	20¾	
Miners on wages, . . .	5	. . .	$1 80	. . .	10		
Outside laborers, . . .	7	1	1 31	$0 90			
Inside laborers, . . .	5	. . .	1 53				
Outside mechanics, . .	6	. . .	1 85				
Outside mule driver, .	1	. . .	1 35				
Mining overseer, . . .	2	. . .	3 28				

ALBERT FOSTER, *Secretary.*

Forestville.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 5,312 tons; $8,339 84, at railroad scales.

Whole number of persons employed, 173.

Amount paid annually for wages of employés, $8,475 70.

Amount paid for materials used in business, $1,818 89.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	67	. . .	$1 52	. . . .	10	34	
Miners on wages, . . .	12	. .	1 60				
Outside laborers, . . .	18	. . .	1 15				
Inside laborers, . .	21	5	1 36	74 cts.			
Outside mechanics, . .	8	. . .	1 42				
Outside mule drivers,	4	1	1 02	80			
Inside mule drivers, .	2	2	1 36	83			
Dumpers, ...	2	. . .	1 26				
Slate pickers, ...	. . .	29	. . .	53			
Mining overseers, . .	2	. . .	3 58				

ALBERT FOSTER, *Secretary.*

Girard.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 73,003 tons; $114,614 71, at railroad scales.

Whole number of persons employed, 224.

Amount paid annually for wages of employés, $64,837 11.

Amount paid for materials used in business, $16,272 32.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	26	. .	$1 69 to 3 69	. . .	10	194½	Average $2 41.
Miners on wages, . . .	12	. .	1 80				
Outside laborers, . . .	31	2	1 29	94 cts.			
Inside laborers, . . .	41	4	1 59	84			
Outside mechanics, . .	8	. . .	1 74				
Outside mule drivers,	2	6	1 44	95			
Inside mule drivers, .	9	1	1 46	79			
Slate pickers, ...	4	74	1 05	65			
Mining overseers, . .	4	. . .	2 87				

ALBERT FOSTER, *Secretary.*

George Fales.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 5,804 tons; $11,143 68, at railroad scales.

Whole number of persons employed, 92.

Amount paid annually for wages of employés, $6,206 40.

Amount paid for materials used in business, $2,248 17.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	33	. . .	$1 93	. . .	. . .	19½	
Miners on wages, . . .	3	. . .	1 38				
Outside laborers, . . .	8	. . .	1 10	. . .	10		
Inside laborers, . . .	15	1	1 18	$0 76			
Outside mechanics, . .	5	. . .	1 36				
Outside mule drivers,	. . .	4	. . .	65			
Inside mule drivers, .	6	. . .	1 05				
Slate pickers, ...	. . .	15		54			
Mining overseers, . .	2	. . .	2 65				

ALBERT FOSTER,
Secretary.

Glendower.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 54,332 tons; $85,302 81, at railroad scales.

Whole number of persons employed, 241.

Amount paid annually for wages of employés, $62,911 89.

Amount paid for materials used in business, $14,869 27.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	58	. . .	$1 06 to 2 59	. . .	10	164¾	Average, $1 73
Miners on wages, . . .	15	. . .	1 80				
Outside laborers, . . .	19	3	1 33	$0 82			
Inside laborers, . . .	41	7	1 56	71			
Outside mechanics, . .	13	. . .	1 64				
Outside mule drivers,	3	3	1 40	77			
Inside mule drivers, .	10	3	1 45	90			
Dumpers, ...	2	. . .	1 28				
Slate pickers, ...	. . .	60	. . . .	50			
Mining overseers, . .	4	. . .	2 50				

ALBERT FOSTER,
Secretary.

Helfenstein.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 11 tons; not working..

Whole number of persons employed, 5.

Amount paid annually for wages of employés, $2,703 46.

Amount paid for materials used in business, $86 67.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miner on wages, . . .	1	. . .	$1 80	. . .	10		
Outside laborer, . . .	1	. . .	1 33				
Inside laborer, ...	1	. . .	1 53				
Mining overseers, . .	2	. . .	2 68				

ALBERT FOSTER,
Secretary.

Hammond.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 101,966 tons; $160,086 62, at railroad scales.

Whole number of persons employed, 236.

Amount paid annually for wages of employés, $76,597 27.

Amount paid for materials used in business, $23,211 33.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, .	43	. . .	$1 52 to 3 52	. . .	10	200½	Average, $2 52.
Miners on wages, . . .	7	. . .	1 72				
Outside laborers, . . .	34	1	1 29	$0 97			
Inside laborers, . . .	36	3	1 60	64			
Outside mechanics, . .	8	. . .	1 69				
Outside mule drivers,	2	5	1 50	83			
Inside mule drivers, .	8	2	1 48	96			
Dumpers, ...	2	. . .	1 22				
Slate pickers, ...	. . .	77	. . . .	62			
Mining overseers, . .	3	. . .	2 89				

ALBERT FOSTER,
Secretary.

Henry Clay.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Whole number of persons employed, 2.

Amount paid annually for wages of employés, $729 24.

Outside laborers, 2; daily wages paid men, $1 33; hours worked per day, 10.

ALBERT FOSTER,
Secretary.

Indian Ridge.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity in tons and value in dollars of annual product, 122,368 tons; $192,117 76, at railroad scales.

Whole number of persons employed, 453.

Amount paid annually for wages of employés, $106,690 98.

Amount paid for materials used in business, $22,412 62.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	137	. . .	92 c. to $3 46	. . .	10	108¼	Average, $1 96.
Miners on wages,	7	. .	1 79				
Outside laborers,	42	2	1 26	$0 84			
Inside laborers,	84	18	1 53	72			
Outside mechanics,	13		1 71				
Outside mule drivers,	2	8	1 50	83			
Inside mule drivers,	23	2	1 21	87			
Dumpers,	2	. .	1 29				
Slate pickers,	. . .	110	. . . .	65			
Mining overseers,	3	. . .	3 06				

ALBERT FOSTER,
Secretary.

Keystone.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 56,721 tons; $89,051 97, at railroad scales.

Whole number of persons employed, 216.

Amount paid annually for wages of employés, $56,702 37.

Amount paid for materials used in business, $15,072 43.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	23	.	$1 66 to 2 96	. .	10	158¾	Average $2 41.
Miners on wages,	10	. .	1 82				
Outside laborers,	39	1	1 28	$0 97			
Inside laborers,	34	6	1 69	83			
Outside mechanics,	7	. .	1 73				
Outside mule drivers,	3	2	1 15	97			
Inside mule drivers,	11	. .	1 40				
Dumpers,	. . .	2	. . . .	99			
Slate pickers,	2	71	1 05	61			
Mining overseers,	5	. .	2 73				

ALBERT FOSTER, *Secretary.*

Knickerbocker.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 104,882 tons; $164,664 74, at railroad scales.

Whole number of persons employed, 259.

Amount paid annually for wages of employés, $75,420 49.

Amount paid for materials used in business, $12,806 73.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	73	. .	$0 64 to 2 12	. .	10	167¾	Average $1 31.
Miners on wages,	4	. .	1 80				
Outside laborers,	27	3	1 31	$0 90			
Inside laborers,	27	5	1 55	71			
Outside mechanics,	8	. .	1 65				
Outside mule drivers,	3	8	1 50	85			
Inside mule drivers,	7	. .	1 13				
Dumpers,	2	. .	1 21				
Slate pickers,	. . .	90	. . . .	63			
Mining overseers,	2	. .	3 23				

ALBERT FOSTER, *Secretary.*

Locust Spring.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 43,094 tons; $67,657 58, at railroad scales.

Whole number of persons employed, 274.

Amount paid annually for wages of employés, $54,878 83.

Amount paid for materials used in business, $24,296 81.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, .	72	. .	$0 57 to 2 77	. .	10	111	Average $1 74.
Miners on wages, . . .	5	. . .	1 80				
Outside laborers, . . .	29	4	1 28	$0 90			
Inside laborers, . . .	43	5	1 53	81			
Outside mechanics, . .	6	. . .	1 76				
Outside mule drivers,	6	2	1 44	90			
Inside mule drivers, .	6	. . .	1 31				
Dumpers, ...	3	. . .	1 20				
Slate pickers, ...	2	88	1 20	60			
Mining overseers, . .	3	. . .	2 94				

ALBERT FOSTER, *Secretary.*

Locust Run.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Columbia county.

Quantity of tons, and value in dollars of annual product, 41,450 tons; $65,076 50, at railroad scales.

Whole number of persons employed, 189.

Amount paid annually for wages of employés, $40,685 72.

Amount paid for materials used in business, $9,290 51.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, . .	19	. .	$2 06 to 2 45	. .	10	163	Average $2 24.
Miners on wages, . .	17	. . .	1 80				
Outside laborers, . . .	23	8	1 28	$0 79			
Inside laborers, . . .	34	2	1 56	68			
Outside mechanics, . .	12	. . .	1 61				
Outside mule drivers,	. . .	3	. . .	76			
Inside mule drivers, .	7	3	1 31	95			
Dumpers, ...	1	. .	1 05				
Slate pickers, ...	. . .	58	. .	58			
Mining overseers, . .	2	. . .	3 14				

ALBERT FOSTER, *Secretary.*

Mt. Carmel Shaft.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons, and value in dollars of annual product, 122,455 tons; $192,254 35, at railroad scales.

Whole number of persons employed, 481.

Amount paid annually for wages of employés, $122,240 20.

Amount paid for materials used in business, $20,242 77.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	175	. .	$1 15 to 2 35	. .	10	163½	Average $1 66.
Miners on wages, . . .	14	. . .	1 80				
Outside laborers, . .	41	4	1 26	$0 92			
Inside laborers, . . .	36	19	1 53	72			
Outside mechanics, . .	11	. . .	1 70				
Outside mule drivers,	3	4	1 50	97			
Inside mule drivers, .	25	8	1 35	98			
Dumpers, ...	2	. . .	1 28				
Slate pickers, ...	. . .	135	. . .	65			
Mining overseers, . .	4	. . .	2 73				

ALBERT FOSTER, *Secretary.*

Merriam.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 85,501 tons; $134,236 57, at railroad scales.

Whole number of persons employed, 334.

Amount paid annually for wages of employés, $100,166 99.

Amount paid for materials used in business, $20,093 74.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	85	. .	$1 01 to 3 27	. .	10	178¼	Average, $2 15.
Miners on wages,	8	. . .	1 75				
Outside laborers,	40	. . .	1 28				
Inside laborers,	72	5	1 57	$0 86			
Outside mechanics,	10	. . .	1 67				
Outside mule drivers,	2	2	1 43	90			
Inside mule drivers,	12	2	1 29	86			
Slate pickers,	. . .	91	. . .	60			
Mining overseers,	5	. . .	2 50				

ALBERT FOSTER,
Secretary.

Mahanoy City.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 86,227 tons; $135,376 39 at railroad scales.

Whole number of persons employed, 294.

Amount paid annually for wages of employés, $82,770 89.

Amount paid for materials used in business, $23,027 76.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	93	. . .	$1 08 to 3 17	. . .	10	185	Average $1 81.
Miners on wages,	5	. . .	1 70				
Outside laborers,	24	. . .	1 31				
Inside laborers,	35	5	1 55	$0 66			
Outside meahanics,	12	. . .	1 67				
Outside mule drivers,	3	3	1 50	85			
Inside mule drivers,	11	1	1 22	90			
Dumpers,	2	. . .	1 28				
Slate pickers,	. . .	96	. . .	59			
Mining overseers,	4	. . .	2 82				

ALBERT FOSTER,
Secretary.

Mine Hill Gap.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 61,467 tons; $96,502 19, at railroad scales.

Whole number of persons employed, 331.

Amount paid annually for wages of employés, $81,038 47.

Amount paid for materials used in business, $21,078 30.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	56	. . .	$1 57 to $3 53	. . .	10	169¼	Average, $2 58.
Miners on wages, . . .	34	. . .	1 75				
Outside laborers, . . .	34	6	1 28	$0 84			
Inside laborers, . . .	61	17	1 58	68			
Outside mechanics, . .	17	. . .	1 65				
Outside mule driver, .	1	3	1 50	75			
Inside mule driver, .	11	5	1 19	94			
Dumpers, ...	3	. . .	1 20				
Slate pickers, ...	. . .	79	. . . .	52			
Mining overseers, . .	4	. . .	2 67				

ALBERT FOSTER, *Secretary.*

Middle Creek Shaft.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 5,369 tons; $11,165 44, at railroad scales.

Whole number of persons employed, 150.

Amount paid annually for wages of employés, $12,550 87.

Amount paid for materials used in business, $2,583 29.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	45	. .	$1 62 to 2 72	. .	. . .	31	Average, $2 15.
Miners on wages, . .	12	. . .	1 58				
Outside laborers, . . .	13	6	1 14	$0 73	10		
Inside laborers, . . .	27	7	1 37	56			
Outside mechanics, . .	7	. . .	1 60				
Outside mule drivers,	2	3	1 34	50			
Inside mule drivers, .	3	3	1 06	78			
Dumper, ...	1	. . .	1 20				
Slate pickers, ...	. .	18	. .	40			
Mining overseer, . . .	3	. . .	2 90				

ALBERT FOSTER, *Secretary.*

North Franklin, No. 1.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons, and value in dollars of annual product, 4,677 tons; $7,342 89, at railroad scales.

Whole number of persons employed, 6.

Amount paid annually for wages of employés, $5,779 72.

Amount paid for materials used in business, $1,949 23.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Outside laborers, . . .	4	. . .	$1 25	. . .	10	27½	
Outside mechanic, . .	1	. . .	1 84				
Outside mule driver, .	1	. . .	1 35				

ALBERT FOSTER, *Secretary.*

North Franklin, No. 2.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 47,962 tons; $75,300 34, at railroad scales.

Whole number of persons employed, 204.

Amount paid annually for wages of employés, $41,386 53.

Amount paid for materials used in business, $10,781 40.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	72	. .	$0 60 to 2 61	. . .	10	117¾	Average, $1 47.
Miners on wages, . . .	3	. . .	1 73				
Outside laborers, . . .	18	4	1 26	$0 89			
Inside laborers, . . .	28	6	1 42	83			
Outside mechanics, . .	8	. .	1 47				
Outside mule drivers,	3	5	1 40	86			
Inside mule drivers, .	8	2	1 25	90			
Dumpers, ...	2	. . .	1 27				
Slate pickers, ...	. . .	43	. . . .	51			
Mining overseers, . .	2	. . .	3 18				

ALBERT FOSTER, *Secretary.*

North Ashland.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Columbia county.

Quantity of tons and value in dollars of annual product, 71,376 tons; $112,060 32, at railroad scales.

Whole number of persons employed, 243.

Amount paid annually for wages of employés, $70,164 51.

Amount paid for materials used in business, $27,346 11.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	57	. .	$1 20 to 3 39	. .	10	176½	Average $2 30.
Miners on wages, . . .	3	. . .	1 75				
Outside laborers, . . .	40	2	1 23	$0 94			
Inside laborers, . . .	36	4	1 55	64			
Outside mechanics, .	10	. .	1 66				
Outside mule drivers,	4	5	1 28	86			
Inside mule drivers, .	5	2	1 37	97			
Dumpers, ...	2	. . .	1 22				
Slate pickers, ...	. . .	71	. . . .	59			
Mining overseers, . .	2	. . .	3 29				

ALBERT FOSTER, *Secretary.*

North Mahanoy.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 70,045 tons; $109,970 65, at railroad scales.

Whole number of persons employed, 269.

Amount paid annually for wages of employés, $58,792 71.

Amount paid for materials used in business, $14,920 74.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	101	. .	$0 68 to 3 61	. .	10	154	Average $1 47.
Miners on wages, . . .	2	. . .	1 80				
Outside laborers, . .	19	2	1 30	$0 90			
Inside laborers, . . .	37	5	1 55	51			
Outside mechanics, . .	6	. . .	1 71				
Outside mule drivers,	1	2	1 50	83			
Inside mule drivers, .	10	1	1 20	90			
Dumper, ...	1	. . .	1 42				
Slate pickers, ...	. . .	80	. .	59			
Mining overseers, . .	2	. . .	3 15				

ALBERT FOSTER, *Secretary.*

Newkirk.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Whole number of persons employed, 1.

Amount paid annually for wages of employés, $485 21.

Outside laborer, 1; daily wages paid men, $1 33; hours worked per day, 10.

ALBERT FOSTER, *Secretary.*

Otto.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 66,253 tons; $104,017 21, at railroad scales.

Whole number of persons employed, 319.

Amount paid annually for wages of employés, $79,042 88.

Amout paid for materials used in business, $13,739 25.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	123	. .	$1 37 to 2 97	. .	10	168	Average $1 81.
Miners on wages,	11	. . .	1 80				
Outside laborers,	26	6	1 27	$0 76			
Inside laborers,	38	6	1 45	81			
Outside mechanics,	12	. . .	1 72				
Outside mule drivers,	3	6	1 35	84			
Inside mule drivers,	1	4	1 53	90			
Dumpers,	3	. . .	1 35				
Slate pickers,	. . .	75	. . .	50			
Mining overseers,	5	. . .	2 60				

ALBERT FOSTER, *Secretary.*

Potts.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Columbia county.

Quantity of tons, and value in dollars of annual product, 81,516 tons; $127,980 12, at railroad scales.

Whole number of persons employed, 305.

Amount paid annually for wages of employés, $82,809 13.

Amount paid for materials used in business, $26,148 78.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract . .	49	. .	$1 41 to 3 42	. .	10	171	Average $2 55.
Miners on wages, . . .	22	. . .	1 78				
Outside laborers, . . .	46	1	1 28	$0 90			
Inside laborers, . . .	49	14	1 69	83			
Outside mechanics, .	11	. . .	1 74				
Outside mule drivers,	2	2	1 42	68			
Inside mule drivers, .	12	2	1 41	98			
Dumpers, ...	2	. . .	1 20				
Slate pickers, . .	. . .	87	. .	60			
Mining overseers, . .	6	. . .	2 70				

ALBERT FOSTER, *Secretary.*

Preston, Nos. 1 and 2.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 80,585 tons; $126,518 45.

Whole number of persons employed, 336.

Amount paid annually for wages of employés, $91,967.

Amount paid for materials used in business, $27,113 26.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, . .	71	. .	$1 33 to 3 85	. .	10	172	Average $2 16.
Miners on wages, . . .	18	. . .	1 74				
Outside laborers, . . .	47	1	1 25	$0 68			
Inside laborers, . . .	56	6	1 57	71			
Outside mechanics, . .	12	. .	1 74				
Outside mule drivers,	6	6	1 32	86			
Inside mule drivers, .	15	1	1 36	83			
Dumpers, ...	4	. . .	1 27				
Slate pickers, ...	. . .	88	. .	61			
Mining overseers, . .	5	. . .	2 93				

ALBERT FOSTER, *Secretary.*

Preston, No. 3.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 38,600 tons; $60,602 at railroad scales.

Whole number of persons employed, 227.

Amount paid annually for wages of employés, $54,294 97.

Amount paid for materials used in business, $20,148 09.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, . .	54	. . .	$1 35 to 3 26	. . .	10	140¾	Average $2 27.
Miners on wages, . .	7	. . .	1 70				
Outside laborers, . . .	30	1	1 26	$0 90			
Inside laborers, . . .	36	7	1 57	71			
Outside mechanics, . .	8	. . .	1 74				
Outside mule drivers,	5	1	1 23	90			
Inside mule drivers, .	10	. . .	1 38				
Dumpers, ...	2	. . .	1 29				
Slate pickers, ...	. . .	61	. . . .	55			
Mining overseers, . .	5	. . .	2 67				

ALBERT FOSTER, *Secretary.*

Plank Ridge.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 80,679 tons; $126,666 03 at railroad scales.

Whole number of persons employed, 208.

Amount paid annually for wages of employés, $74,017 56.

Amount paid for materials used in business, $18,191 65.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	65	. . .	$0 91 to 2 81	. . .	10	176¾	Average $1 99.
Miners on wages, . . .	3	. .	1 71				
Outside laborers, . . .	26	6	1 28	$0 75			
Inside laborers, . . .	29	4	1 54	72			
Outside mechanics, . .	10	. . .	1 68				
Outside mule drivers,	1	3	1 50	83			
Inside mule drivers, .	7	. . .	1 12				
Dumpers, ...	2	. . .	1 28				
Slate pickers, ...	. . .	49	. . . .	54			
Mining overseers, .	3	. . .	3 13				

ALBERT FOSTER, *Secretary.*

Pottsville.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 2,574 tons; $4,041 18, at railroad scales.

Whole number of persons employed, 86.

Amount paid annually for wages of employés, $48,292 55.

Amount paid for materials used in business, $10,063 06.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	6	. .	$1 88 to 2 32	. . .	10	8¾	Average $2 10.
Miners on wages, . . .	12	. . .	1 75				
Outside laborers, . . .	19	1	1 23	$0 75			
Inside laborers, . . .	26	. . .	1 52				
Outside mechanics, . .	10	. . .	1 80				
Outside mule drivers,	1	2	1 20	75			
Inside mule drivers, .	4	3	1 20	90			
Mining overseers, . .	2	. . .	3 59				

ALBERT FOSTER, *Secretary.*

Pine Forest.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 41,741 tons; $65,533 37, at railroad scales.

Whole number of persons employed, 206.

Amount paid annually for wages of employés, $54,830 78.

Amount paid for materials used in business, $16,268 83.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	79	. .	$1 19 to 3 31	. . .	10	151¾	Average $1 70.
Miners on wages, . . .	5	. . .	1 60				
Outside laborers, . . .	21	6	1 23	$0 67			
Inside laborers, . . .	25	3	1 55	71			
Outside mechanics, . .	12	. . .	1 78				
Outside mule drivers,	1	2	1 65	75			
Inside mule drivers, .	9	. . .	1 17				
Dumper, ...	1	. . .	1 28				
Slate pickers, ...	. . .	38	. . . .	49			
Mining overseers, . .	4	. . .	2 53				

ALBERT FOSTER, *Secretary.*

Pine Knot.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Whole number of persons employed, 2.

Amount paid annually for wages of employés, $1,010 57.

Amount paid for materials used in business, $55 22.

Outside laborers, 2; daily wages paid men, $1 33.

ALBERT FOSTER, *Secretary.*

Phœnix Park, No. 2.

Philadelphia and Reading Iron and Coal Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, 2; not working.

Whole number of persons employed, 40.

Amount paid annually for wages of employés, $11,067 22.

Amount paid for materials used in business, $2,002 77.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	21	. .	$0 62 to 1 32	. .	10	2	Average, $0 97.
Miners on wages, . . .	4	. . .	1 80				
Outside laborers, . . .	4	1	1 34	$0 60			
Inside laborer, . . .	. . .	1	. . .	75			
Outside mechanics, . .	5	. . .	1 74				
Outside mule driver, .	1	. . .	1 35				
Inside mule drivers, .	. . .	2	. .	81			
Mining overseer, . . .	1	. . .	2 67				

ALBERT FOSTER, *Secretary.*

Phœnix Park, No. 3.

Philadelphia and Reading Iron and Coal Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 11,008 tons; $17,392 64, at railroad scales.

Whole number of persons employed, 75.

Amount paid annually for wages of employés, $20,673 69.

Amount paid for materials used in business, $7,055 17.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	30	. .	$0 96 to 1 19	. .	10	71½	Average, $1 07.
Miners on wages,	10	. .	1 80				
Outside laborers,	12	3	1 31	$0 85			
Inside laborer,	1	. .	1 53				
Outside mechanics,	6	. .	1 75				
Outside mule drivers,	2	. .	1 39				
Slate pickers,	. .	9	. . . .	55			
Mining overseers,	2	. .	3 28				

ALBERT FOSTER, *Secretary.*

Pyne.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 17,846 tons; $28,196 68, at railroad scales.

Whole number of persons employed, 138.

Amount paid annually for wages of employés, $25,779 28.

Amount paid for materials used in business, $5,725 00.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	50	. .	$1 39 to 2 22	. .	10	130¾	Average, $1 71.
Miners on wages,	1	. . .	1 80				
Outside laborers,	16	1	1 25	$0 53			
Inside laborers,	18	6	1 53	71			
Outside mechanics,	7	. .	1 70				
Outside mule drivers,	2	4	1 35	63			
Inside mule drivers,	. . .	2	. . .	90			
Slate pickers,	. . .	28	. . .	48			
Mining overseers,	3	. . .	2 77				

ALBERT FOSTER, *Secretary.*

Rainbow.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Whole number of persons employed, 9.

Amount paid annually for wages of employés, $4,176 78.

Amount paid for materials used in business, $1,021 92.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Outside laborers, . .	4	. . .	$1 42	. . .	10		
Outside mechanics, . .	4	. . .	1 76				
Outside mule drivers,	1	. . .	1 33				

ALBERT FOSTER, *Secretary.*

Richardson.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 70,192 tons; $110,201 44, at railroad scales.

Whole number of persons employed, 307.

Amount paid annually for wages of employés, $74,591 09.

Amount paid for materials used in business, $18,587 88.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	86	. .	$1 03 to 3 33	. .	10	159¼	Average $2 02.
Miners on wages, . . .	32	. . .	1 71				
Outside laborers, . . .	33	3	1 27	$0 81			
Inside laborers, . .	38	14	1 58	70			
Outside mechanics, . .	11	. . .	1 70				
Outside mule drivers,	2	3	1 28	90			
Inside mule drivers, .	5	5	1 31	92			
Dumpers, ...	2	. . .	1 13				
Slate pickers, . . .	. . .	69	. .	52			
Mining overseers, . .	4	. . .	2 67				

ALBERT FOSTER, *Secretary.*

Reliance.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Northumberland county.

Quantity of tons of annual product, 724. (Not working.)

Whole number of persons employed, 7.

Amount paid annually for wages of employés, $1,411 63.

Amount paid for materials used in business, $360 06.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Outside laborers,	2	. . .	$1 26	. . .	10		
Outside mechanics,	2	. . .	1 51				
Outside mule drivers,	1	. . .	1 35				
Mining overseers,	2	. . .	3 00				

ALBERT FOSTER, *Secretary.*

Schuylkill.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 34,540 tons; $54,227 80, at railroad scales.

Whole number of persons employed, 127.

Amount paid annually for wages of employés, $28,914 95.

Amount paid for materials used in business, $7,544 07.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	34	. .	$1 15 to 3 37	. . .	10	140	Average $1 85.
Outside laborers,	7	1	1 26	$0 90			
Inside laborers,	28	. . .	1 55				
Outside mechanics,	6	. . .	1 63				
Outside mule drivers,	2	1	1 35	75			
Inside mule drivers,	8	2	1 21	90			
Dumpers,	2	. .	1 27				
Slate pickers,	. . .	34	. . . .	58			
Mining overseers,	2	. . .	3 00				

ALBERT FOSTER, *Secretary.*

Shenandoah City.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 30,234 tons; $47,467 38, at railroad scales.

Whole number of persons employed, 213.

Amount paid annually for wages of employés, $33,235 47.

Amount paid for materials used in business, $8,995 26.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	58	. .	$0 66 to 3 17	. . .	10	89¼	Average $2 10.
Miners on wages, . . .	5	. . .	1 80			From June, 1878, only.	
Outside laborers, . . .	22	2	1 25	$0 90			
Inside laborers, . . .	30	9	1 52	72			
Outside mechanics, . .	7	. .	1 73				
Outside mule drivers,	3	4	1 40	86			
Inside mule drivers, .	10	1	1 24	72			
Dumpers, ...	2	. . .	1 21				
Slate pickers, ...	. . .	57		59			
Mining overseers, . .	3	. . .	2 79				

ALBERT FOSTER, *Secretary.*

Tunnel.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 66,296 tons; $104,084 72, at railroad scales.

Whole number of persons employed, 227.

Amount paid annually for wages of employés, $65,711 42.

Amount paid for materials used in business, $18,330 91.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	2	. . .	$1 86	. . .	10	174½	Average, $1 86.
Miners on wages, . .	19	. . .	1 86				
Outside laborers, . . .	36	2	1 28	$0 90			
Inside laborers, . . .	50	11	1 67	79			
Outside mechanics, . .	16	. . .	1 67				
Outside mule drivers,	8	1	1 31	60			
Inside mule drivers, .	12	2	1 33	88			
Slate pickers, ...	. . .	63	. . .	58			
Mining overseers, . .	5	. . .	2 75				

ALBERT FOSTER, *Secretary.*

Thomaston.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 69,171 tons; $108,598 47, at railroad scales.

Whole number of persons employed, 333.

Amount paid annually for wages of employés, $83,308 90.

Amount paid for materials used in business, $22,559 58.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	94	. .	$0 80 to 2 51	. .	10	130	Average, $1 76.
Miners on contract, .	28	. . .	1 80				
Outside laborers, . . .	30	2	1 29	$0 77			
Inside laborers, . . .	37	10	1 58	71			
Outside mechanics, . .	10	. . .	1 73				
Outside mule drivers,	3	7	1 21	79			
Inside mule drivers, .	11	12	1 25	92			
Dumper, ...	1	. . .	1 35				
Slate pickers, ...	. . .	84	. . .	53			
Mining overseers, . .	4	. . .	2 57				

ALBERT FOSTER, *Secretary.*

Tailorsville.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product: None—not working.

Whole number of persons employed, 1.

Amount paid annually for wages of employés, $1,957 49.

Amount paid for materials used in business, $527 50.

Outside laborers, 1; daily wages paid, $1 33; hours worked per day, 10.

ALBERT FOSTER, *Secretary.*

West Brookside.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons, and value in dollars of annual product, 282,264 tons; $547,592 16, at railroad scales.

Whole number of persons employed, 687.

Amount paid annually for wages of employés, $192,099 88.

Amount paid for materials used in business, $39,929 31.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	226	. .	$1 26 to 3 90	. .	10	180½	Average $2 14.
Miners on wages,	10	. . .	1 76				
Outside laborers,	44	3	1 33	$0 77			
Inside laborers,	189	20	1 53	68			
Outside mechanics,	13	. . .	1 72				
Outside mule drivers,	4	11	1 50	83			
Inside mule drivers,	18	30	1 41	91			
Dumpers,	4	. . .	1 28				
Slate pickers,	. . .	110	. . .	55			
Mining overseers,	5	. . .	2 96				

ALBERT FOSTER, *Secretary.*

Wadesville Shaft.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 22,583 tons; $35,455 21, at railroad scales.

Whole number of persons employed, 112.

Amount paid annually for wages of employés, $48,690 67.

Amount paid for materials used in business, $26,165 55.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	19	. . .	$1 89		10	51¾	Average, $1 89.
Miners on wages, . . .	14	. . .	1 65				
Outside laborers, . . .	23	2	1 27	$0 73			
Inside laborers, .	21	1	1 54	68			
Outside mechanics, .	10	. . .	1 72				
Outside mule drivers,	3	2	1 40	64			
Slate pickers, ...	. . .	14	. . .	50			
Mining overseers, . .	3	. .	3 07				

ALBERT FOSTER, *Secretary.*

West Shenandoah.

Philadelphia and Reading Coal and Iron Company, Philadelphia.

Mine located in Schuylkill county.

Quantity of tons and value in dollars of annual product, 69,443 tons; $109,025 51, at railroad scales.

Whole number of persons employed, 281.

Amount paid annually for wages of employés, $66,738 48.

Amount paid for materials used in business, $13,371 02.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	103	. .	$0 96 to 2 82	. .	10	174	Average, $1 87.
Miners on wages, . . .	11	. . .	1 70				
Outside laborers, . . .	28	4	1 25	$0 83			
Inside laborers, . . .	17	5	1 53	72			
Outside mechanics, . .	7	.	1 76				
Outside mule driver, .	1	7	1 50	85			
Inside mule drivers, .		9	. . .	95			
Dumper, ...	1	.	1 35				
Slate pickers, ...	. . .	85	.	59			
Mining overseers, . .	3	. . .	2 74				

ALBERT FOSTER, *Secretary.*

Delaware and Hudson Canal Company's Collieries.*

Delaware and Hudson Canal Company, Providence, Lackawanna county.

Mines located in Lackawanna and Luzerne counties.

Quantity of tons, and value in dollars of annual product, 1,652,221 tons of 2,240 pounds ; value, $1,643,629 45.

Whole number of persons employed, 6,030.

Amount paid annually for wages of employés, $1,386,874 31.

Amount paid for materials used in business, $219,550 86.

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*Coal Brook, Racket Brook, No. 1 Shaft, No. 3 Shaft, White Oak, Grassy Island, Olyphant, Marvine, Legitt's Creek, Von Storch, Mill Creek, Pine Ridge, Laurel Run, Baltimore Slope, Baltimore Tunnel, Plymouth No. 2, Plymouth, No. 4, Plymouth No. 5.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	.REMARKS.
Miners on contract, .	1,410	. .	$1 70	. . .	10	184	
Miners on wages, . . .	171	. . .	1 49				
Outside laborers, . . .	138	.	1 00 to 1 10				
Inside laborers, .	1,355	. .	1 27				
Engineers, pumpmen, & outside mechanics,	160	. . .	1 70				
Engineers, pumpmen, & inside mechanics,	87	. . .	1 70				
Firemen,	39	. .	1 25				
Outside mule drivers,	. . .	38	. . .	$0 59			
Inside mule drivers, .	. . .	521	. .	80 to 1 11			
Weigh-masters, . . .	30	. . .	1 25				
Dumpers, ...	37	. . .	1 15				
Slate pickers, . . .	38	1,077	80	31 to 44			
Mining overseers, . .	20	. .	3 38				
Civil engineers, . . .	3	8	3 20	1 38			
Outside firemen, . 25 Clerks and office, 10	35	. . .	2 24				
Miscellaneous labor, &c	815	48	1 08	51			

A. H. VANDLING, *Supterintendent.*

Meadow Brook and National.

William Connell & Co., (limited,) Scranton, Lackawanna county.

Mine located in Twentieth ward, Scranton city, Lackawanna county.

Quantity of tons, and value in dollars, of annual product, 146,970 tons; $200,442 39.

Whole number of persons employed, 619.

Amount of capital employed in business, $400,000.

Amount paid annually for wages of employés, $126,026 92.

Amount paid for materials used in business, including royalty, $63,718 03.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	127	. . .	$2 80	. . .	4.3	133	
Miners on wages, . . .	10	. . .	1 65	. .	4.3	133	
Outside laborers, . . .	23	. .	1 15	. .	4.3	133	
Inside laborers, . .	158	. . .	1 28	. . .	4.3	133	
Outside mechanics, . .	24	. . .	1 80	. . .	4.3	133	
Inside mechanics, . .	8	. . .	1 65	. . .	4.3	133	
Outside mule drivers,	. . .	14	. . .	$0 65	4.3	133	
Inside mule drivers, .	6	70	1 38	90	4.3	133	
Weigh-masters, . . .	2	. . .	50	. . .	4.3	133	
Dumpers, ...	7	. . .	1 15	. . .	4.3	133	
Slate pickers, ...	9	147	1 15	45	4.3	133	
Mining overseers, . .	4	. . .	3 00	. . .	10	309	
Civil engineer, ...	1	. . .	3 00	. . .	10	309	
Teamsters, stable bosses, &c., ...	9	. . .	. . .	. . .	10	309	

REMARKS.—No change of importance has taken place in our trade during the past year, the production being but little more than that of 1877, but there has been more satisfaction in doing business in this, than in last year, for the reason that the demand being more regular, we have been enabled to operate our mines to better advantage, an advantage which has been shared by our miners as well.

The characteristics of our collieries have been fully described in report for 1877; we deem it unnecessary to repeat it in this report.

WM. CONNELL, *Superintendent.*

Hillside Coal and Iron Company's Mines.

Hillside Coal and Iron Company, Scranton, Lackawanna county.

Mines located: Hillside colliery, Luzerne county; Forest City colliery, Susquehanna county; Erie colliery, Lackawanna county; Spring Brook colliery, Lackawanna county.

Quantity of tons and value in dollars of annual product, 269,496 tons of 2,240 pounds; $336,870.

Whole number of persons employed, 972.

Amount paid annually for wages of employés, $261,500.

Amount paid for materials used in business, $49,800.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	235	. . .	$1 73	. . . .	10	225	
Miners on wages,	4	. . .	1 32				
Outside laborers,	108	. . .	95 to 1 10				
Inside laborers,	285	. . .	1 27				
Outside mechanics,	21	. . .	1 70				
Inside mechanics,	5	. . .	1 70				
Outside mule drivers,	. . .	17	. . . . .	$0 59			
Inside mule drivers,	. . .	85	. . . . .	80 to 1 11			
Weigh-master,	3	. . .	1 25				
Dumpers,	15	. . .	1 15				
Slate pickers,	9	148	80	30 to 50			
Mining overseers,	7	. . .	*46 00 to *76 00				
Civil engineers,	1	. . .	*100 00				
Office and colliery clerks,	7	. . .	1 85				
Door boys,	. . .	22	. . . . .	40 to 50			

* Per month.

REMARKS.—Hillside colliery is situated at Pleasant Valley. The outside works consist of large double breaker, with a full capacity of 1,000 tons per day. Openings consist of single shaft and second opening, or man-way. Railroad branches on Lehigh Valley and D. and H. Canal Company's railroad.

Forest City colliery is situated at the head of the Lackawanna valley, above Carbondale. Consists of a single drift opening, screens, and chutes, with a full capacity of about 3,000 tons per month. Coal shipped on the Jefferson Branch of the Erie railway.

Erie colliery is situated on D. and H. Canal Company's railroad, near Carbondale. Large single breaker, with a capacity of 600 tons per day. Single shaft and second opening.

Spring Brook colliery is situated on D. and H. Canal Company's railroad, at Moosic. Single breaker; capacity, 600 tons per day. Openings: shaft, two drifts, and man-way. Operations at this colliery were suspended September, 1876, and resumed July, 1878.

SAM'L HINES, *Superintendent.*

Roaring Brook.

Roaring Brook Coal Company, Scranton, Lackawanna county.

Mine located in Lackawanna county.

Quantity of tons and value in dollars of annual product, (December estimated,) 77,305 tons; value, $104,605.

Whole number of persons employed, 315.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, (December estimated,) $73,151.

Amount paid for materials used in business, (December estimated,) $18,807.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	66	. . .	. . .	. . .	10	120	
Miners (laborers) on wages,	66	. .	$1 40 and 1 52				
Outside laborers,	32	. . .	1 15				
Inside laborers,	22	. . .	*1 25				
Outside mechanics,	5	. . .	2 00				
Outside mule drivers,	. .	11	. .	$1 00			
Inside mule drivers,	. . .	42	. . .	80			
Inside gate tenders,	. . .	12	. . .	50			
Weigh-master,	1						
Slate pickers,	. . .	50	. . .	40			
Mining overseer,	1	. . .	3 33				
Outside overseer,	1	. . .	2 00				
Fire boss,	1	. . .	2 25				
Stationary engineers,	5	. . .	2 00				

* Average.

T. F. HUNT, *President.*

Pennsylvania Coal Company.

Pennsylvania Coal Company, Dunmore, Lackawanna county, Pa.

Mines located in Pittston, Luzerne county, and Dunmore, Lackawanna county.

Quantity of tons and value in dollars of annual product: Pittston, 800,934 tons; Dunmore, 111,788 tons; total, 912,722 tons; value, $1,369,083.

Whole number of persons employed: Pittston, 2,666; Dunmore, 366; total, 3,032.

Amount paid annually for wages of employés: Pittston and Dunmore, $879,220 03.

Amount paid for materials used in business: Pittston and Dunmore, $87,492 22. (Supplies taken from one place for the whole work—no account kept for any particular opening.)

At Pittston Mines.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	665	. .	$1 75	. . . .	10	194	Estimated.
Miners on wages,	20	. .	$1 50 to 1 87				
Outside laborers,	304	. .	1 00 to 1 25				
Inside laborers,	804	. .	1 20 to 1 28				
Outside mechanics,	69	.	1 20 to 2 30				
Inside mechanics,	43	. .	1 10 to 1 75				
Outside mule drivers,	. .	34	. . . .	$0 70			
Inside mule drivers,	. .	198	. . . .	78			
Weigh-masters,	18	. .	1 25 to 1 75				
Dumpers,	23	. .	1 15				
Slate pickers,	. .	463	. . . .	$0 30 to 68			
Mining overseers,	21						
Civil engineers,	2	. .	$100 pr. mo.				
Asst. civil engineers,	2	. .	2 pr. day.				

At Dunmore Mines.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	99	. .	$1 87 to $1 93	. . . .	10	193¼ & 190	
Miners on wages,	6	. .	1 45 to 1 70				
Outside laborers,	22	. .	85 to 1 15				
Inside laborers,	116	. .	1 15 to 1 20				
Outside mechanics,	2	. .	1 50 to 1 55				
Inside mechanics,	3	. .	1 40 to 1 55				
Outside mule drivers,	. .	4	80 to 1 50				
Inside mule drivers,	. .	35	. . . .	$0 80 to $0 90			
Weigh-masters,	3	. .	1 15 to 1 75				
Dumpers,	7	.	1 15				
Slate pickers,	. .	44	. . . .	30 to 40			
Mining and other overseers,	2	. .	3 00				
Civil engineer,	1	. .	$100 pr. mo.				
Gate boys,	. .	21	. . . .	55			
Breaker foreman,	1	.	2 00				

Remarks.—We have seventeen shafts and three slopes in operation, but two of these shafts are only used for pumping water. We have, also, at these, seven breakers. The average number of days in operation, as set opposite "miners on contract," is the average time that each place was engaged in getting out coal, as the places were working turn-about for part of year.

JOHN B. SMITH,
General Superintendent.

Upper Lehigh.

Upper Lehigh Coal Company, Upper Lehigh, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 198,755 tons; value, $337,883 50.

Whole number of persons employed, 486.

Amount of capital employed in business, $700,000.

Amount paid annually for wages of employés, $121,907 76.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, . .	138	. . .	$2 50	. .	10	132	
Miners on wages, . . .	12	. . .	1 70				
Outside laborers, . . .	23	. . .	1 00				
Inside laborers, . . .	84	. . .	1 42				
Outside mechanics, . .	22	. . .	1 60				
Inside mechanics, . .	4	. . .	1 55				
Outside mule drivers,	4	6	1 15	$0 85			
Inside mule drivers, .	25	9	1 42	1 20			
Dumpers, ...	11	. . .	1 15				
Slate pickers, ...	60	84	87	50			
Mining overseers, . .	3	. . .	4 00				
Civil engineer, ...	1	. . .	2 50				

SAM'L B. PRICE, *Chief Clerk.*

Franklin.

Franklin Coal Company, Wilkes-Barre, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 76,000 tons; $87,388 32.

Whole number of persons employed, 325.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	53	. . .	$2 25	. . .	. . .	90	
Outside laborers, . . .	80	. . .	1 15				
Inside laborers, . . .	65	. . .	1 31				
Outside mechanics, . .	14	. . .	1 75				
Inside mechanics, . .	5	. . .	1 70				
Outside mule drivers,	. . .	5	. . .	$0 65			
Inside mule drivers, .	. . .	17	. . .	95			
Door tenders, ...	. . .	13	. . .	50			
Dumpers, ...	3	. .	1 15				
Slate pickers, ...	13	20	1 05	30			
Mining overseer, . . .	1	. . .	5 00				
Civil engineer, ...	1	. .	7 00				
Breaker boys, ...	. . .	34	. . .	60			
Fire boss, ...	1	. . .	2 00				

R. R. MORGAN, *Superintendent.*

Council Ridge Colliery.

J. Leisenring & Co., Eckley, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 143,888 tons; value, $$244,609 60.

Whole number of persons employed, 360.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $96,610 36.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	115	. . .	$2 57		10	$196\frac{4}{10}$	
Miners on wages, . . .	15	. .	1 70				
Outside laborers, . . .	10	. . .	1 00				
Inside laborers, . . .	70	9	1 46	$0 65			
Outside mechanics, . .	7	. . .	1 60				
Inside mechanics, . .	4	. .	1 46				
Outside mule drivers,	2	5	1 15	75			
Inside mule drivers, .	15	. . .	1 46				
Dumpers, ...	8	. . .	1 15				
Slate pickers, ...	38	60	85	53			
Mining overseers, . .	2	. . .	. . .	. . .	. . .	. . .	1, $100 per month. 1, 50 per month.

J. LEISENRING & CO.

Humboldt.

Linderman, Skeer & Co., Hazleton, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, $21,340\frac{5}{20}$ tons, (December estimate ;) value at mines about $30,000.

Whole number of persons employed, 99 men and boys.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	26	. . .	. . .	. . .	. . .	82	Contract, $3 50 per day.
Miners on wages, . .	2	. . .	$1 70				
Outside laborers, . . .	14	2	1 18	$0 75			
Inside laborers, . . .	9	. . .	1 40	. . .	. . .	. . .	Paid by miners.
Outside mechanics, . .	6	. . .	1 50				
Outside mule drivers,	2	3	1 50	83			
Inside mule driver, .	1	2	1 42	1 12			
Top and bottom, . . .	2	. . .	1 50				
Dumpers, ...	1	. .	1 15				
Slate pickers, ...	6	22	1 00	48			
Mining overseer, . . .	1						

LINDERMAN, SKEER & CO.
Bethlehem, Pa.

Butler.

Butler Colliery Company, Pittston, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 50,000 tons value, $75,000.

Whole number of persons employed, 201.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $53,818 01.

Amount paid for materials used in business, $9,917 93.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	37	. . .	$0 52*	. . .	7	150	Miner cuts about 9 tons
Miners on wages, . .	37	. . .	18*	. .	10	. . .	Paid by miners.
Outside laborers, . . .	5	5	1 10†	$0 65†			
Inside laborers, . .	11	. .	1 35	. . .	10	. . .	Footmen, car mover, &c
Outside mechanics, . .	7	. . .	2 12½	. . .	10	. . .	Footmen, car mover, &c
Inside mechanics, . .	2	. . .	1 65	. .	10	. . .	Footmen, car mover, &c
Outside mule drivers, .	3	2	1 40	90	10	. . .	Footmen, car mover, &c
Inside mule drivers, .	2	11	1 60	80	. . .	. . .	Footmen, car mover, &c
Weigh-master, ...	1	. . .	1 80				
Dumper, ...	1	. . .	. . .	1 00			
Slate pickers, ...	. . .	74	. . .	40			
Outside foreman, . . .	1						
Mining overseer, . . .	1						
Superintendent, . . .	1						

* Per ton. † Average.

REMARKS.—Shaft and two additional openings. Shaft 100 feet in depth Miners pay their helpers; get $5 20 for day of ten tons. Pay for powder oil, smithing, &c., as is usual.

F. C. DUNING, per *Secretary.*

Seneca, Ravine, and Twin.

The Pittston Coal Company, Pittston, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 75,000 tons value, $150,000.

Whole number of persons employed, 450.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $111,222 39.

Amount paid for materials used in business, $17,063 84.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	78	. . .	$2 09 to $2 50	. . .	10	133$\frac{3}{4}$	
Outside laborers, . . .	44	. . .	1 15 to 1 20				
Inside laborers . . .	30	. . .	1 20 to 1 45				
Outside mechanics, . .	13	. . .	1 89 to 2 00				
Inside mechanics, .	7	. . .	1 20 to 1 60				
Outside mule drivers,	. . .	10	60 to 1 00				
Inside mule drivers, .	. . .	48	. . . .	$0 52			
Weigh-master, ...	3	. . .	1 75 to 2 00				
Dumpers, ...	7	. . .	1 20				
Slate pickers, ...	.	144	. . . .	47			
Mining overseers, . .	2	. . .	2 10 to 3 85				

CHAS. HISCOCH, *Superintendent.*

Mount Pleasant.

Pardee, Sons & Co., Hazleton, Luzerne county.

Mine located in Hazle township, Luzerne county.

Quantity of tons and value in dollars of annual product, 44,109.18 tons; value, $81,603.

Whole number of person employed, 144.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	36	. . .	. . .	. . .	. . .	*955$\frac{1}{2}$	
Miners on wages, . . .	3	. . .	. . .	. . .	. . .	951$\frac{1}{20}$	
Outside laborers, . . .	16						
Inside laborers, . . .	23	3					
Outside mechanics,	7						
Outside mule drivers,	2	1					
Inside mule drivers, .	3	8					
Slate pickers, ...	9	31					
Mining overseers, . .	2						

* Hours.

REMARKS.—At this colliery the Wharton vein of coal is mined. Wages paid employés vary with the price of coal on board vessels at tidal points nearest New York city. Miners nearly all work at contract work. The lowest net earnings of a miner working a "breast" or "chamber" during the year 1878 was $242 81, and the highest $337 81. Miners working at "narrow work" earned more wages than those working "breast work." Miners laborers were paid during the year 1878 from $7 02 to $9 72 per week—varying with the price of coal. Outside laborers were paid from 97 cents to $1 05 per day, and for 10 hours work. Boys received from 25 cents (per day for 10 hours work) to 60 cents. First-class engineers received from $48 60 to $54 per month. Firemen were paid from $1 20 to $1 35 per day for 12 hours work. Mechanics were paid from $1 50 to $2 per day for 10 hours work.

PARDEE, SONS & CO.

Hollenback.

Robert S. Poole, Pittston, Luzerne county.

Mine located near Wilkes-Barre, Luzerne county.

Quantity of tons and value in dollars of annual product, 20,643 tons; value, $27,688.

Whole number of persons employed, 71.

Amount paid annually for wages of employés, $18,422.

Amount paid for materials used in business, $2,056.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	17	. . .	. . .	$2 75*	. . .	110	
Outside laborers,	4	. . .	$1 14	. . .	. . .	110	
Inside laborers,	18	. . .	2 00	. . .	. . .	110	
Outside mechanics,	4	. . .	1 75	. . .	. . .	110	
Inside mechanics,	2	. .	1 65	. . .	. . .	110	
Outside mule drivers,	. . .	1	1 00	. . .	.	110	
Inside mule drivers,	7	. . .	1 14	. . .	. . .	110	
Weigh-master,	1	. . .	1 75	. . .	. . .	110	
Dumpers,	3	. . .	1 26	. . .	. . .	110	
Slate pickers,	2	16	. . .	39	9	110	
Mining overseer,	1	. . .	. . .	3 00	. . .	110	
Outside foreman,	. . .	. . .	. . .	2 75	. . .	300	

* Average.

REMARKS.—Hollenback colliery, situated on the main road from Pittston to Wilkes-Barre, consists of one slope in the Hillman vein; also, one slope in the Abbott vein, or seam. The coal in the Hillman vein is very pure white ash; average, 7 feet thickness. The Abbott is 5 feet 7 inches thick in one tier, free from slate, and a first class domestic coal.

R. S. POOLE.

Kingston Collieries.

Kingston Coal Company, limited, Danville, Montour county, and Kingston, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 245,000 tons; value, $325,000.

Whole number of persons employed, 691.

Amount of capital employed in business, $700,000.

Amount paid annually for wages of employés, $142,000.

Amount paid for materials used in business, $52,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	155	. .	av'age $2 50			Breaker No. 1, 130. Breaker No. 2, 135.	
Miners' laborers on wages, ...	165	. .	$1 37 to 1 75				
Outside laborers, . . .	90	. .	1 00 to 1 25				
Inside laborers, . .	10	. .	1 25 to 1 60				
Outside mechanics, . .	25	. .	1 45 to 1 90				
Inside mechanics, . .	5	. .	1 80 to 2 10				
Outside mule drivers,	. . .	5	. . . .	$0 69 to $0 90			
Inside mule drivers, .	40	10	96 to 1 15	69 to 90			
Weigh-masters, . . .	2	. .	*37 50				
Dumpers, ...	10	. .	1 00 to 1 15				
Slate pickers, ...	35	95	65 to 81	40 to 55			
Mining overseers, . .	4	. .	*70 00				
Door boys, ...	. . .	40	. . . .	51			

*Average wages per month.

GEORGE F. GISSINGER,
Secretary.

Hillman.

H. Baker Hillman, Wilkes Barre, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 30,000.

Number of persons employed, 130.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	30	. .	$1 70 to $2 25	$0 50 to $1 25	¾ time	104	
Miners on wages, . .	. .	. .	1 70				
Outside laborers, . . .	8	. .	1 15	40 to 1 10	¾ time	104	
Inside laborers, . . .	44	. .	1 50				
Outside mechanics, . .	2	. .	1 75	. . . .	¾ time	104	
Outside mule drivers,	2	. .	1 10	. . . . . .	¾ time	104	
Inside mule drivers, .	10	. .	. . . .	80 to 1 25			
Dumpers, ...	2	. .	1 15				
Slate pickers, ...	10	. .	40 to 80	40			
Mining overseer, . . .	1						

H. BAKER HILLMAN.

East Sugar Loaf.

Linderman, Skeer & Co., Stockton, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, about 178,000 tons.

Whole number of persons employed, 611.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	142	. . .	. . .	. . .	8	149	
Miners on wages, . . .	10	. .	$1 68	. . .	10		
Outside laborers, . . .	63	7	1 09	$0 55	10		
Inside laborers, . . .	150	10	1 33	60	10		
Outside mechanics, . .	26	. .	1 61 to 2 00	. .	10		
Inside mechanics, . .	5	. . .	1 45		10		
Outside mule drivers,	4	7	1 10	75	10		
Inside mule drivers, .	26	11	1 34	1 02	10		
Dumpers, ...	8	2	1 00	70	10		
Slate pickers, ...	14	101	90	42	10		
Mining overseers, . .	3	. . .	. . .	. . .	. . .	. . .	$70 per month.
Engineers, ...	10	. .	1 54	. . .	12		
Firemen, ...	12	. . .	1 24	. . .	12		

REMARKS.—Three breakers; 4 slopes working; 1 new slope opened; tunnel at No. 4, from Mammoth to Wharton vein.

WM. AIREY, *Superintendent*,
Per BISHOP.

Cross Creek.

Coxe Bros. & Co., Jeddo, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, about 290,000 tons, worth about $500,000 at the mines.

Whole number of persons employed, 766.

Amount paid annually for wages of employés, about $290,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	184	. . .	$2 45	. . .	10		
Miners on wages, . . .	53	. .	1 70				
Outside laborers, . . .	25	. .	1 00				
Inside laborers, . . .	171	. . .	1 45				
Outside mechanics, . .	48	. . .	1 60				
Outside mule driver, .	6	. .	1 28				
Inside mule drivers, .	37	. . .	1 45				
Door boys, . .	. . .	35	. . .	$0 85			
Dumpers and platform loaders, ...	14	. . .	1 20				
Slate pickers, . .	93	71	1 02½	65			
Mining overseers, . .	3						
Engineers, ...	9	. . .	1 56				
Watchmen, ...	3	. . .	1 45				
Firemen, ...	3	. . .	1 40				
Machinists, ...	9	2	1 75	80			

The wages vary with price of coal from month to month, so that prices given are only approximate.

REMARKS.—There are three collieries, known as No. 1, No. 2, and No. 3. (or Woodside.) No. 1 colliery, in operation 253 days; No. 2 colliery, in operation $88\frac{3}{10}$ days; No. 3 colliery, in operation 53 days.

COXE BROS. & CO.

No. 2.

Susquehanna Coal Company, East Nanticoke, Luzerne county.

Mine located at Nanticoke, Luzerne county.

Quantity of tons, and value in dollars, of annual product: See Tunnel No. 3.

Whole number of persons employed, 633.

Amount of capital employed in business: See Tunnel No. 3.

Amount paid annually for wages of employés: See Tunnel No. 3.

Amount paid for materials used in business: See Tunnel No. 3.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.
Miners on contract,	142	. . .	$2 25	. . . .	10 and 7½	181½
Miner on wages,	1	. . .	2 00			
Outside laborers,	49	. . .	$1 15 to 1 50			
Inside laborers,	195	. . .	1 28 to 1 70			
Outside mechanics,	11	. . .	1 40 to 1 85			
Inside mechanics,	9	. . .	1 40 to 1 85			
Outside mule driver,	1	2	1 15	$0 79		
Inside mule drivers,	14	44	1 28 to 1 45	$0 82 to 1 10		
Dumpers,	5	. . .	1 26			
Slate pickers,	40	87	79 to 97	40 to 70		
Mining overseers,	2	. . .	$75 to $90 ꝑ mo			
Door boys,	. . .	31	. . . .	59 to 70		

J. W. STICKNEY,
General Superintendent.

Tunnel No. 3.

Susquehanna Coal Company, Wilkes-Barre, Luzerne county.

Mine located in West Nanticoke, Luzerne county.

Quantity of tons and value in dollars of annual product, for all three collieries, 408,452 tons; $661,692 24. December estimated.

Whole number of persons employed, 332.

Amount of capital employed in business, $2,136,800. Bonded debt, $2,000,000.

Amount paid annually for wages of employés for all three collieries, $374,840 02. December estimated.

Amount paid for materials used in business for all three collieries, $103,296 38. December estimated.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	81	. . .	. .	. . .	$7\frac{1}{2}$	$117\frac{7}{10}$	
Miners on wages,	5	. . .	$1 68				
Outside laborers,	28	. .	1 15				
Inside laborers,	73	. . .	1 47				
Outside mechanics,	12	. . .	1 75				
Inside mechanics,	2	. . .	1 85				
Outside mule drivers,	1	2	1 30	$1 00			
Inside mule drivers,	. . .	14	. .	82 to 1 22			
Weigh-master,	1	. . .	1 75				
Dumpers,	5	1	1 50	75			
Slate pickers,	19	75	79	60			
Mining overseers,	3	. . .	3 00				
Door boys,	. . .	10	. . .	59			

J. W. STICKNEY,
General Superintendent.

No. 1.

Susquehanna Coal Company, East Nanticoke, Luzerne county.

Mine located in Nanticoke, Luzerne county.

Quantity of tons and value in dollars of annual product: See Tunnel No. 3.

Whole number of persons employed, 615.

Amount of capital employed in business: See Tunnel No. 3.

Amount paid annually for wages of employés: See Tunnel No. 3.

Amount paid for materials used in business: See Tunnel No. 3.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.
Miners on contract, . .	105	. . .	$2 25	. . . .	10 and 7½	121¼
Miners on wages, . . .	4	. . .	1 68			
Outside laborers, . . .	90	. . .	$1 15 to 1 58			
Inside laborers, . . .	223	. . .	1 40 to 1 54			
Outside mechanics, . .	33	. . .	1 58 to 2 25			
Inside mechanics, . .	6	. . .	1 68 to 1 75			
Outside mule drivers,	5	4	1 30	$0 79		
Inside mule drivers, .	4	24	1 40	$0 82 to 92		
Dumpers, ...	4	. . .	1 18 to 1 25			
Slate pickers, ...	18	70	79	40 to 70		
Mining overseers, . .	5	. . .	$90 ⅌ month			
Civil engineers, . . .	2	. . .	2 50			
Door boys, ...	. . .	12	. . . . .	59 to 69		
Clerks, ...	6	. . .	$45 to $105			

J. W. STICKNEY,
General Superintendent.

Holywood.

Calvin Pardee & Co., Hazleton, Luzerne county.

Mine located in Hazle township, Luzerne county.

Quantity of tons and value in dollars of annual product, 49,076 tons; value at mines, $93,244 40.

Whole number of persons employed, 156.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	34	. . .	. . .	. . .	10	119	
Outside laborers, . . .	23	6					
Inside laborers, . . .	25	1					
Outside mechanics, . .	8						
Inside mechanics, . .	2						
Outside mule drivers,	4						
Inside mule drivers, .	. . .	6					
Weigh-master, ...	1	. . .					
Slate pickers, ...	7	38					
Mining overseer, . . .	1						

REMARKS.—The Mammoth Vein of coal is worked at this colliery· Wages vary with the price of coal at tidal points near New York. This colliery was in operation 1,190 hours during the year 1878.

The greatest amount earned by a miner working at contract work during the year, in a "breast" or "chamber," was $508 04. Another miner, under the same conditions, earned $457 87. Another, $406 84. Another, under the same circumstances, earned $394 57, which was the smallest amount earned by a miner working contract work during the year. The amounts named are net earnings, all labor and mine expenses, of every nature, being deducted.

Miners laborers and company hands earned per week: When coal was at its lowest price, $7 19; when coal was at its highest price, $9 13.

Engineers were paid per month: When coal was lowest, first class, $48 60; second class, $40 50. When coal was highest, first class, $54; second class, $45.

Mechanics, (one carpenter and one blacksmith,) received the same wages. When coal was lowest in price, $18\frac{2}{10}$ cents per hour; when coal was the highest in price, $20\frac{2}{10}$ cents per hour.

Outside laborers wages ranged during the year, from $9\frac{7}{10}$ cents per hour, to $11\frac{3}{10}$ cents per hour.

Men slate pickers are paid from 8 cents to $9\frac{1}{2}$ cents per hour. Boy slate pickers are paid from $2\frac{1}{2}$ cents to 6 cents per hour.

C. PARDEE, *Superintendent.*

Hazleton, Laurel Hill, Cranberry, East Crystal Ridge, Sugar Loaf and South Sugar Loaf.

A. Pardee & Co., Hazleton, Luzerne county.

Mines located in Luzerne county.

Quantity of tons and value in dollars of annual product, 287,476 tons; valued at $546,204.

Whole number of persons employed, 933.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	273						
Outside laborers,	147						
Inside laborers,	117						
Outside mechanics,	24						
Outside mule drivers,	10	12					
Inside mule drivers,	17	26					
Slate pickers, (men and boys.)	241						
Mining overseers,	14						

One mine was idle during the whole of 1878. The others were in operation from $111\frac{15}{20}$ to $131\frac{15}{20}$ days of 10 hours.

REMARKS.—The wages paid employés vary with the price of coal at tidal points, near New York city.

A. PARDEE & CO.,
Per C. PARDEE, *Superintendent.*

Latimer.

Pardee Bro. & Co., Hazleton, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 114,870 tons; $1 90 per ton.

Whole number of persons employed, 300.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	99	. . .	$1 70$\frac{11}{12}$	. . . .	9 & 10	200	
Outside laborers,	25	. .	1 00 to 1 60				
Inside laborers,	13	. . .	1 46½	. . . .			
Outside mechanics,	5	. .	1 60 to 2 00				
Inside mechanics,	3	. .	1 46 to 2 00				
Outside mule drivers,	2	4	1 05 to 1 60				
Inside mule drivers,	. . .	7	1 00 to 1 46½				
Slate pickers,	110	30	0 90 to 1 00	0 30 to 0 70			
Mining overseers,	2						

L. S. ALLISON.

Salem Colliery.

Salem Coal Company, Shickshinny, Luzerne county.

Mine located in Luzerne county.

Quantity of tons and value in dollars of annual product, 47,900 tons; value, $70,092 29.

Whole number of persons employed, 197.

Amount of capital employed in business, about $75,000.

Amount paid annually for wages of employés, $56,500.

Amount paid for materials used in business, $8,250.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	40	. . .	. . .	. .	10	180	Average, $50 a month.
Miner on wages,	5	. . .	$1 36				
Outside laborers,	4	. . .	1 25				
Inside laborers,	50	. . .	1 10				
Outside mechanics,	2	. .	1 50				
Outside mule drivers,	. . .	7	. . .	$0 75			
Inside mule drivers,	. . .	12	. . .	85			
Weigh-master,	. . .	1	. . .	75			
Dumpers and headmen	6	. . .	1 25				
Slate pickers,	67	. . .	. .	40			
Door boys,	. .	2	. . .	50			

SALEM COAL COMPANY,
Per J. H. HARMAN.

Williamstown Colliery.

Summit Branch Railroad Company, Williamstown, Dauphin county.
Mine located in Williamstown, Dauphin county.
Quantity of tons of annual product, 268,531$\frac{2}{20}$ tons.
Whole number of persons employed, 696.
Amount paid annually for wages of employés, $245,083 38.
Amount paid for materials used in business, $77,443 06.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during the year.	REMARKS.
Miners on contract,	220	. . .	. . .	. . .	10	200¼	
Miners on wages,	40	. . .	$1 60				
Outside laborers,	48	. . .	1 20				
Inside laborers,	149	. . .	1 35				
Outside mechanics,	10	. .	1 60				
Inside mechanics,	6	. . .	1 60				
Outside mule drivers,	4	8	1 20	$0 90			
Inside mule drivers,	5	47	1 20	90			
Dumpers,	5	. . .	1 35				
Slate pickers,	12	113	75	50			
Mining overseers,	2	. . .	3 50				
Civil engineer,	1						
Door tenders,	. . .	26	. . .	50			

JOS. ANTHONY,
General Superintendent.

Short Mountain and Big Lick Collieries.

Lykens Valley Coal Company, Wiconisco, Dauphin county.

Mine located in Dauphin county.

Quantity of tons of annual product: Shipped 112,095.9 tons.

Whole number of persons employed, 605 men and boys.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	153	. .	$2 31	. . .	10	176¼	
Miners on wages, . . .	47	. . .	1 70				
Outside laborers, . . .	60	. . .	1 17				
Inside laborers, . .	100	. . .	1 50				
Outside mechanics, . .	44	. . .	1 70				
Inside mechanics, . .	10	. . .	1 70				
Outside mule drivers,	2	12	1 17	$0 90			
Inside mule drivers, .	12	26	1 50	1 00			
Weigh-master, ...	1	. . .	1 50				
Dumpers, ...	12	. . .	1 17				
Slate pickers, ...	6	92	75	50			
Mining overseer, . . .	1						
Civil engineer, . . .	1						
Fan turners and doors,	. . .	26	. . .	90			

REMARKS.—Big Lick Colliery was robbed out and abandoned in December, 1877, and is now only used as a pumping station, in connection with Short Mountain Colliery, and hands employed are included in this report of the Short Mountain Colliery for 1878.

E. C. HANNA, *Superintendent.*

Henry Clay, No. 1.

J. Langdon & Co., Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons, and value in dollars of annual product, 97,000 tons; value about $120,000.

Whole number of persons employed, 275.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	125	. . .	$1 60	. . .	10	214	
Outside laborers, . . .	24	. . .	1 00				
Inside laborers, . . .	50	3	1 20	$1 00			
Outside mechanics, . .	6	. . .	1 65				
Inside mechanic, . . .	6	. . .	1 65				
Outside mule drivers,	. . .	5	. . .	83			
Inside mule drivers, .	. . .	6	. . .	1 10			
Dumpers, ...	2	. . .	. . .	1 00			
Slate pickers, ...	. . .	50	. . .	43			
Mining overseer, . . .	2	. . .	3 20				
Outside boss, ...	1	. . .	3 00				

A. FULTON, *Superintendent.*

Peerless.

John Cruikshank, Shamokin, Northumberland county.

Mine located in Coal township, adjoining Shamokin borough, Northumberland county.

Quantity of tons and value in dollars of annual product, 31,500 tons; about $40,000 at the mines.

Whole number of persons employed, 176.

Amount of capital employed in business, estimated at about $55,000.

Amount paid annually for wages of employés, about $26,400.

Amount paid for materials used in business, annual average, about $16,500 materials used up.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	71						
Miners on wages, . .	8	. . .	$1 33⅓	$0 45	10	150	
Outside laborers, . . .	17	. . .	1 08⅓	. . . .	10	150	
Inside laborers, . . .	19	. . .	1 08⅓	. . . .			
Outside mechanics, .	2	. . .	1 33⅓	. . . .	10	150	
Outside mule drivers,	1	4	65	. . . .	10	157	
Inside mule drivers, .	5	. . .	1 08⅓				
Slate pickers, ...	1	40	75	45	. . . .	150	
Mining overseer, . . .	1	. . .	2 00				
Clerk, ...	1	. . .	2 00				

REMARKS.—This colliery first commenced to ship, June 25, 1877. The character of the coal is a free burning red ash, very free from impurities, and will not clinker.

JOHN CRUIKSHANK,
Per OWEN.

Sterling.

Fulton & Kendrick, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 54,000 tons; value, about $67,000.

Whole number of persons employed, 215.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	90	. . .	$1 60	. . .	10	165	
Outside laborers,	20	. . .	1 00		10	165	
Inside laborers,	45	3	1 20	$1 00	10	165	
Outside mechanics,	4	. .	1 65	. .	10	165	
Outside mule drivers,	. . .	5	. . .	83	10	165	
Inside mule drivers,	. .	4	. . .	1 10	10	165	
Dumper,	1	. .	1 00	. . .	10	165	
Slate pickers,	.	40		43	10	165	
Mining overseers,	2	. . .	3 20				
Outside bosses,	1	. . .	3 00				

A. FULTON, *Superintendent.*

Luke Fidler.

Mineral Railroad and Mining Company, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons of annual product, 102,400.

Whole number of persons employed, 324.

Amount paid annually for wages of employés, $80,000.

Amount paid for materials used in business, $41,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, .	160	. .	$1 58	. . .	10	189	
Outside laborers, . . .	20	. . .	1 00				
Inside laborers, . . .	19	. . .	1 29				
Outside mechanics, . .	12	. . .	1 50				
Inside mechanics, . .	2	. .	1 63				
Outside mule drivers,	. .	6	. . .	$0 85			
Inside mule drivers, .	34	. . .	. . .	1 00			
Dumpers, ...	3	. . .	1 04				
Slate pickers, ...	. . .	64	.	65			
Mining overseer, . . .	1	. . .	2 64				

HOLDEN CHESTER, *Superintendent*,
Per Ellert.

Cameron.

Mineral Railroad and Mining Company, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons, 154,294.

Whole number of persons employed, 480.

Amount paid annually for wages of employés, $125,000.

Amount paid for materials used in business, $69,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Miners on contract, .	220	. . .	$1 58	. .	10	189	
Outside laborers, . . .	60	. . .	1 10				
Inside laborers, . . .	30	. . .	1 25				
Outside mechanics, . .	18	. . .	1 58				
Inside mechanics, . .	7	. . .	1 50				
Outside mule drivers,	7	. . .	. . .	$0 83			
*Inside mule drivers,	49	. . .	. . .	1 20			
Dumpers, ...	5	.	1 04				
Slate pickers, ...	. . .	72	. . .	65			
Mining overseers, . .	4	. . .	2 64				
Door boys, ...	. . .	8	. . .	55			

* Men and boys.

HOLDEN CHESTER, *Superintendent*,
Per Ellert.

Hickory Ridge.

Mineral Railroad and Mining Company, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons of annual product, 21,520.02.

Whole number of persons employed, 145.

Amount paid annually for wages of employés, $23,000.

Amount paid for materials used in business, $8,342 01.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	54	. . .	$1 50	. . .	10	149	
Outside laborers, . . .	19	. . .	1 00				
Inside laborers, . . .	8	. . .	1 15				
Outside mechanics, . .	6	. .	1 29				
Outside mule drivers,	. . .	4	. . .	$0 66			
Inside mule drivers, and loaders, ...	. . .	12	. . .	1 04			
Dumper, ...	1	. . .	1 00				
Slate pickers, ...	. . .	10	. . .	62			
Mining overseer, . . .	1	. . .	2 33				

REMARKS.—This breaker was destroyed by fire on evening of November 4, 1878.

HOLDEN CHESTER, *Superintendent*,
Per ELLERT.

Stuartville Colliery.

William Montelius, Mount Carmel, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 82,632 tons; value, about $124,000.

Whole number of persons employed, 250.

Amount paid annually for wages of employés, $86,570 21.

Amount paid for materials used in business, about $15,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	86	12	$2 50	$1 00	8 and 10	225	
Outside laborers, . . .	32	. . .	1 25				
Inside laborers, . . .	10	. . .	1 35				
Outside mechanics, . .	4	. . .	2 00				
Outside mule drivers,	4	. . .	. .	$1 10			
Inside mule drivers, .	10	. . .	. . .	1 00			
Slate pickers, ...	. . .	94	. .	60			
Boss, ...	1	. . .	3 25				
Outside boss, ...	1	. . .	3 00				
Carpenters, ...	2	. . .	2 00				
Smiths, ...	2	. . .	2 00				
Engineers, ...	4	. . .	2 10				

REMARKS.—The colliery is working two veins—the Mammoth and Skidmore. Mammoth about 22 feet thick; Skidmore about 10 feet. Two slopes—one to the surface, the other to a deeper level. Coal, the hard white ash.

A. M. MONTELIUS, *Superintendent.*

Buck Ridge.

Isaac May, senior, William G. Audenried, George A. Audenried, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 50,321 tons; value, $75,493 50.

Whole number of persons employed, 250.

Amount of capital employed in business, $60,000.

Amount paid annually for wages of employés, $75,000.

Amount paid for materials used in business, $2,500.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, .	101	. . .	$1 25	. . .	10	250	
Miners on wages, . . .	20	. . .	1 25	. . .	10	250	
Outside laborers, . . .	20	. . .	1 00	. . .	10	250	
Inside laborers, . . .	20	. . .	1 08⅔	. . .	10	250	
Outside mechanics, . .	5	. . .	1 25	. . .	10	250	
Outside mule drivers,	. . .	10	. . .	$0 66⅔	10	250	
Inside mule drivers, .	. .	10	. . .	83⅔	10	250	
Dumpers, ...	1	1	1 25	66⅔	10	250	
Slate pickers, ...	. . .	60		50	10	250	
Mining overseers, . .	2	. . .	2 00	. . .	10	250	

MAY, AUDENRIED & CO.

Excelsior Colliery.

Excelsior Coal Mining Company, Excelsior, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 73,790.17 tons; value, $110,686 42.

Whole number of persons employed, 237.

Amount of capital employed in business, $200,000.

Amount paid annually for wages of employés, $57,254 75.

Amount paid for materials used in business, $14,441 57.

Royalty, rents, and taxes, $28,040 20.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract, . .	105	. . .	$1 45	. . . .	. . .	225	
Outside laborers, . . .	19	. . .	1 12	. . . .	10	225	
Inside laborers, . . .	12	. . .	1 25	. . . .	10	225	
Outside mechanics, . .	4	. . .	1 58	. . . .	10	290	
Inside door boys, . . .	. . .	4	55	. . . .	10	225	
Outside mule drivers,	. . .	2	. . . .	$0 83	10	225	
Inside mule drivers, .	10	2	1 65	60	10	225	
Slate pickers, ...	15	60	81	50	10	225	
Mining overseers, . .	2	. . .	6 00	. . . .	. . .	300	
Civil engineers, . . .	2	. . .	1 45	. . . .	10	270	

REMARKS.—This colliery consists of four openings, on the north and south dips of Nos. 8 and 9 veins. Owing to the flat nature of the work, it has been in operation thirteen years—with an abundance of coal—without going below water-level. A tunnel is now being driven beneath the N C. R. W. and the P. and R. R. to open an immense body of coal on the south side of the tract. If the developments in any way approach reasonable and reliable expectations, and there is every reason to believe they will, there will be coal enough here, without either shaft or slope, to last for several years to come.

C. W. KINGSLEY, *Treasurer.*
Per P. WILLIARD.

Ben Franklin.

Douty & Baumgardner, Shamokin, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 39,000 tons; about $2 per ton at Schuylkill Haven.

Whole number of persons employed, average 146.

Amount of capital employed in business, $60,000.

Amount paid annually for wages of employés, $39,000.

Amount paid for materials used in business, $5,300.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	50	. . .	. . . .	. . . .	10	160	
Outside laborers,	17	. . .	$1 00				
Inside laborers,	27	. . .	$1 06 to 1 15				
Outside mechanics,	5	. . .	1 25 to 1 50				
Inside mechanics,	2	. . .	1 50 to 1 91				
Outside mule drivers,	1	3	80 to 1 06				
Inside mule drivers,	4	1	1 17				
Dumper,	1	. .	1 15				
Slate pickers,	. . .	30	. . . .	$0 25 to $0 80			
Mining overseer,	1	. . .	3 60				
Outside overseer,	1	. . .	3 60				
Slate boss,	1	. . .	1 50				

DOUTY & BAUMGARDNER.

Locust Gap Colliery.

Messrs. Græber & Shepp, Locust Gap, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 64,000 tons; value, $96,000.

Whole number of persons employed, 250.

Amount of capital employed in business, $75,000.

Amount paid annually for wages of employés, $51,500.

Amount paid for materials used in business, $10,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	40	. . .	$2 00	. . .	8	165½	
Outside laborers,	16	. . .	1 50	. . .	10		
Inside laborers,	30	. . .	1 70	. . .	10		
Outside mechanics,	8	. . .	2 00	. . .	10		
Inside mechanics,	2	. . .	1 75	. . .	10		
Outside mule drivers,	. . .	6	. . .	$1 00	10		
Inside mule drivers,	3	3	1 25	1 00	10		
Dumpers,	3	. . .	1 40	. . .	10		
Slate pickers,	48	90	80	60	10		
Mining overseer,	1						

REMARKS.—The Locust Gap colliery is on the south dip of Mammoth vein, and is 148 yards in depth. Two slopes are used, one for hoisting and one for pumping. The coal on the east side is about 30 feet thick; on the west side the vein is split in two, and each is about from 8 to 9 feet thick.

JOHN McELWEE, *Superintendent.*

Enterprise.

Enterprise Coal Company, Excelsior, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, 63,415$\frac{02}{20}$ tons; $70,000, at pit's mouth.

Whole number of persons employed, 182 men, 47 boys—total, 229.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $56,165 81.

Amount paid for materials used in business, $13,965 38.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	93	. . .	$1 84	. . .	9	156½	
Outside laborers,	20	. . .	1 00	.	10	156½	
Inside laborers,	25	2	1 08	$0 58	. .	156½	
Outside mechanics,	3	. . .	1 33	. . .	10	156½	
Inside mechanics,	3	. . .	1 33	. .	10	156½	
Outside mule driver,	1	3	1 00	67	10	156½	
Inside mule drivers,	12	6	1 16	83	10	156½	
Engineers,	7	. . .	1 38	. . .	12	288	
Dumpers,	2	. .	1 08	. .	10	156½	
Slate pickers,	12	36	67	25 to 58	10	156½	
Mining overseer,	1	. . .	5 00	. .	10	313	
Outside boss,	1	. . .	2 00	. . .	10	313	
Clerk,	1	. . .	2 50	. . .	. .	313	
Stable boss,	1	. . .	1 33	. . .	10	365	
Watchmen,	1	. . .	1 00	. . .	10	365	

REMARKS.—The coal is a medium in hardness, neither as hard as Lehigh or as soft as the other Shamokin coals. The remarkable absence of "bone" and slate in the vein, (which averages 8½ feet thick,) makes it a great favorite in the domestic market. It is now thoroughly equipped, and equal to a daily shipment of 500 tons regularly.

WILLIAM GABLE, *Superintendent.*

Packer.

David I. Lewis, Mount Carmel, Northumberland county.

Mine located in Northumberland county.

Quantity of tons and value in dollars of annual product, about 5,000 tons; value, $7,500.

Whole number of persons employed, 30.

Amount of capital employed in business, $3,000.

Amount paid annually for wages of employés, $6,000.

Amount paid for materials used in business, $400.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Miners on contract,	10	...	...	...	10	140	
Miners on wages,	2	...	$2 00				
Outside laborers,	3	...	1 50				
Outside mule driver,	...	1					
Inside mule drivers,	...	2					
Slate pickers,	...	10	...	$0 50			
Mining overseer,	1						
Engineer,	1	...	1 50				

D. I. LEWIS.

COAL STATEMENT FOR 1878.

(Compiled for the *Shamokin Times*, by J. J. JOHN.)

Amount of coal shipped from the several collieries of Northumberland county during the year 1878, the coal shipments of the Shamokin region from the commencement, in 1839, to the present time, including forty years, and some other facts of interest to the coal trade. Collieries numbered according to shipments made.

No.	NAME OF COLLIERY.	NAME OF OPERATOR.	Tonnage for 1878.	
1	Cameron, . .	Mineral Railroad and Mining Company, . .	159,700	14
2	Mt. Carmel Shaft, .	Phila. and Reading Coal and Iron Co , . . .	121,267	09
3	Luke Fidler, . . .	Mineral Railroad and Mining Company, . .	103,299	09
4	Henry Clay, No. 1, .	J. Langdon & Co., ...	96,998	01
5	Big Mountain, . . .	Patterson, Llewellyn & Co., ...	92,837	10
6	Monitor, ...	George W. Johns & Bro., ...	88,210	12
7	Stuartville, ...	William Montelius, ...	80,442	02
8	Excelsior, ...	Excelsior Coal Company, ...	72,310	14
9	Bear Valley, ...	Phila. and Reading Coal and Iron Co., . . .	71,933	04
10	Locust Gap, ...	Graeber & Shepp, ...	63,970	01
11	Enterprise, ...	Enterprise Coal Company, ...	63,414	09
12	Stirling, ...	Fulton & Kendrick, ...	54,085	14
13	Buck Ridge, ...	May, Audenried & Co., ...	46,198	05
14	Trevorton, ...	Phila. and Reading Coal and Iron Co., . . .	39,892	14
15	Ben Franklin, . . .	Douty & Baumgardner, ...	38,576	01
16	Locust Spring, . . .	Phila. and Reading Coal and Iron Co., . . .	34,592	11
17	Peerless, . . .	John Kruikshank, ...	33,788	14
18	Hickory Ridge, . .	Mineral Railroad and Mining Company, . .	21,472	02
19	Black Diamond, . .	William Schwenk & Co., ...	21,003	14
20	Lancaster, ...	Smith & Keiser, ...	8,696	13
21	Reliance . . .	Thomas Baumgardner & Co., ...	7,374	05
22	Greenback, ...	Gorman & Toudy, ...	7,132	12
23	Packer, ...	D. J. Lewis, ...	5,716	13
24	Henry Clay, . . .	J. Langdon & Co., ...	3,975	15
25	Franklin, . . .	Lovell & Booth, ...	3,444	15
26	George Fales, . . .	Phila. and Reading Coal and Iron Co., . . .	2,464	03
27	Carson, ...	Philip Goodwill, ...	1,444	12
28	Marshall, ...	George Raup, ...	10	12
29	Burnside, ...	Phila. and Reading Coal and Iron Co.		
30	Hickory Swamp, .	Mineral Railroad and Mining Company.		
31	Helfenstein, ...	Phila. and Reading Coal and Iron Co.		
	Total by rail for 1878, ...		1,344,254	00

Recapitulation.

East, via Philadelphia and Reading railroad, ...	699,156	12
East, via Lehigh Valley railroad, ...	59,316	02
West, via Northern Central railway, ...	585,781	06
Total by rail for 1878, ...	1,344,254	00
Estimated sales at mines, ...	18,000	00
Estimated consumption at breakers, ...	90,000	00
Total for 1878, ...	1,452,254	00
Total for 1877, ...	1,776,163	00
Loss for 1878, ...	323,909	00

Total Shipments from Shamokin Region to Date.

YEAR.	Total.	YEAR.	Total.
1839,	11,930	1860,	300,256
1840,	15,505	1861,	290,928
1841,	21,463	1862,	304,865
1842,	10,000	1863,	337,136
1843,	10,000	1864,	389,779
1844,	13,087	1865,	484,257
1845,	10,000	1866,	610,809
1846,	12,572	1867,	533,815
1847,	14,904	1868,	911,784
1848,	19,356	1869,	974,015
1849,	19,650	1870,	1,025,515
1850,	19,921	1871,	1,213,096
1851,	24,899	1872,	1,221,326
1852,	25,846	1873,	1,234,063
1853,	15,000	1874,	1,221,550
1854,	63,500	1875,	1,628,683
1855,	116,117	1876,	1,391,752
1856,	210,518	1877,	1,776,163
1857,	266,517	1878,	1,452,254
1858,	242,579		
1859,	305,043	Total,	18,750,453

An Estimate of the Several Anthracite Coal Fields of Pennsylvania.

REGION.	Thickness of coal.	Number of acres.
Schuylkill,	100 feet.	115,200
Lehigh,	50 "	33,160
Shamokin,	70 "	32,000
Lackawanna,	60 "	64,000
Wyoming,	100 "	62,000
Total acres,	. . . .	306,360

Outlets to Market for the Shamokin Coal.

To Baltimore, York, &c., via Northern Central railway.
To Philadelphia, via Philadelphia and Reading railroad.
To New York, via Lehigh Valley railroad.
To Erie and the lakes, via Philadelphia and Erie railroad.
To Elmira and Northern New York, via Williamsport and Elmira railroad.
To Havre de Grace and the South, via Pennsylvania canal.

Coal Productions of the Globe, 1876.

COUNTRIES.	Tons.
1. Great Britain,	133,344,766
2. United States,	49,005,748
3. Germany,	43,364,968
4. France,	17,047,760
5. Belgium,	15,500,000
6. Austria,	11,500,000
7. Russia,	1,750,000
8. Australia,	1,600,000
9. India,	1,000,000
10. Nova Scotia,	709,646
11. Spain,	500,000
12. Japan,	350,000
13. Vancouver's Island,	140,087
14. Portugal,	18,000
15. Italy, China, Chili, &c.,	1,000,000
Total,	276,830,965

Area of Anthracite Coal Basins of Pennsylvania.

		Square miles.
1. Southern coal fields,		146
2. Middle coal fields—Shamokin,	50	
Mahanoy,	41	
Lehigh,	37	
	—	128
3. Northern coal fields,		198
Total area of all basins,		472

COAL, ANTHRACITE—Employees, Production, and Value.

NAME OF COLLIERY, OR PERSONS OPERATING SAME.	Post Office Address.	Mine—Where Located.	Number of tons mined.	Value.	Whole number of persons employed.	Capital employed in business.	Amount paid annually for wages.	Amount paid for materials used in business.
Dauphin County :								
Lykens Valley Coal Company,	Wiconisco,	Dauphin county,	112,095	......	605			
Williamstown Colliery,	Williamstown,	Dauphin county,	268,531	......	696	......	$245,083	$77,443
			380,626	......	1,301	......	$245,083	$77,443
Lackawanna County :								
Delaware and Hudson Canal Company,	Providence,	Lackawanna and Luzerne counties,	1,652.221	$1,643,629	6,030	......	$1,386,874	$219,550
William Connell & Co.,	Scranton,	Lackawanna county,	146,970	200,442	619	$400,000	126,026	63,718
Hillside Coal and Iron Company,	Scranton,	Lackawanna county,	269,496	336,870	972	......	261,500	49,800
Roaring Brook Coal Company,	Scranton,	Lackawanna county,	77,305	104,605	315	200,000	73,151	18,807
			2,145,992	$2,285,546	7,936	$600,000	$1,847,551	$350,965
Luzerne County :								
Upper Lehigh,	Upper Lehigh,	Luzerne county,	198,755	$337,883	486	$700,000	$121,907	
Franklin.	Wilkes-Barre,	Luzerne county,	76,000	78,388	325			
Council Ridge,	Eckley,	Luzerne county,	143,888	244,609	360	150,000	96,610	
Humboldt,	Hazleton,	Luzerne county,	21,340	30,000	99			
Butler,	Pittston,	Luzerne county,	50,000	75,000	201	100,000	53,818	$9,917
Seneca, Ravine, and Twin,	Pittston,	Luzerne county,	75,000	150,000	450	100,000	111,222	17,063
Mount Pleasant,	Hazleton,	Luzerne county,	44,109	81,603	144			
Hollenback Mine,	Pittston,	Luzerne county,	20,643	27,688	71	......	18,422	2,056
Kingston,	Danville and Kingston,	Luzerne county,	245,000	325,000	691	700,000	142,000	52,000
Hillman,	Wilkes-Barre,	Luzerne county,	30,000	......	130			
East Sugarloaf,	Stockton,	Luzerne county,	178,000	......	611			
Cross Creek,	Jeddo,	Luzerne county,	290,000	500,000	766	......	290,000	
Susquehanna Coal Company. No. 2,	East Nanticoke,	Luzerne county,	......	......	633			
Susquehanna Coal Company, No. 3,	Wilkes-Barre,	Luzerne county,	408,452	661,692	332	2,136,800	374,840	103,296
Susquehanna Coal Company, No. 1,	East Nanticoke,	Luzerne county,	......	......	615			
Hollywood,	Hazleton,	Luzerne county,	49,076	93,244	156			
A. Pardee & Co.,	Hazleton,	Luzerne county,	287,476	546,204	933			

Lattimer,	Hazleton,	Luzerne county,	114,870	....	300			
Pennsylvania Coal Company,	Dunmore,	Luzerne county,	912,722	1,369,083				
Dunmore,	Dunmore,	Luzerne county.						
Salem,	Shickshinny,	Luzerne county,	47,900	70,092	197	75,000	56,500	8,250
			3,193,232	$1,610,486	7,500	$3,961,800	$1,265,319	$181,582
Northumberland County:								
Henry Clay, No. 1,	Shamokin,	Northumberland county,	97,000	$120,000	275			
Peerless,	Shamokin,	Northumberland county,	31,500	40,000	176	$55,000	$26,400	$16,500
Sterling,	Shamokin,	Northumberland county,	54,000	67,000	215			
Mineral Railroad and Mining Company,	Shamokin,	Northumberland county,	162,400	....	324	....	80,000	41,000
Cameron,	Shamokin,	Northumberland county,	154,294	......	480	....	125,000	69,000
Hickory Ridge,	Shamokin,	Northumberland county,	21,520	......	145	....	20,000	8,342
Stuartville,	Mount Carmel,	Northumberland county,	82,632	124,000	250	86,570	15,000	
Buck Ridge,	Shamokin,	Northumberland county,	50,321	75,493	250	60,000	60,000	25,000
Excelsior,	Excelsior,	Northumberland county,	73,790	110,686	237	200,000	57,254	14,411
Ben Franklin,	Shamokin,	Northumberland county,	39,000	....	146	60,000	39,000	5,300
Locust Gap,	Locust Gap,	Northumberland county,	64,000	96,000	250	75,000	51,500	10,000
Enterprise,	Excelsior,	Northumberland county,	63,415	70,000	229	150,000	56,165	13,965
Packer,	Mount Carmel,	Northumberland county,	5,000	7,500	30	3,000	6,000	400
			838,872	$710,679	3,007	$689,570	$136,319	$203,948
Schuylkill County:								
S. M. Heaton & Co.,	Raven Run,	Schuylkill county,	78,726	....	265			
Koh-i-noor,	Shenandoah,	Schuylkill county,	112,000	$151,200	330	$300,000	$95,200	$22,400
John C. Hayden & Co.,	Mahanoy City,	Schuylkill county,	43,800	76,650	235	50,000	40,500	15,000
Cambridge Coal Company,	Shenandoah,	Schuylkill county,	5,000	....	27	6,000	5,217	840
Ellsworth,	Broad Mountain,	Schuylkill county,	......	....	63	12,000		
William Penn,	Mahanoy Planes,	Schuylkill county,	123,000	....	300	300,000	150,000	50,000
Staffordshire,	Mahanoy City,	Schuylkill county,	8,811	16,299	30	12,000	8,500	7,721
Bear Run,	Mahanoy City,	Schuylkill county,	57,651	111,138	196	150,000	71,540	17,998
York Farm,	Pottsville,	Schuylkill county,	1,125	2,250	6	2,500	1,703	760
St. Nicholas,	St. Nicholas,	Schuylkill county,	63,134	13,134	185	......	57,308	16,200
Lawrence,	Minersville,	Schuylkill county,	70,477	128,608	223	117,000	65,010	16,425
Draper,	Gilberton,	Schuylkill county,	58,879	90,000	217	......	53,146	18,189
Kehley's Run,	Philadelphia,	Schuylkill county,	90,070	148,605	427	200,000	89,670	18,649
Gilberton,	Gilberton,	Schuylkill county,	55,813	90,000	209	......	48,385	11,275
Middle Lehigh,	Mauch Chunk,	Schuylkill county,	61,106	90,500	400	100,000	61, 87	14,328
Kalmia,	Orwin,	Schuylkill county,	94,912	164,811	284	160,000	80,080	22,400
			914,507	$1,043,195	3,397	$409,500	$830,446	$231,677

COAL, ANTHRACITE—

NAME OF COLLIERY,	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Dauphin county :									
Lykens Valley Coal Company, . .	449	156	605	10	176	$2 31	$1 70	$1 17	. . . .
Williamstown Colliery, ...	502	194	696	10	200	. . . .	1 60	1 20	. . . .
	951	350	1,301						
Lackawanna county :									
Delaware and Hudson Canal Co.,	4,338	1,692	6,030	10	184	1 70	1 49	1 00 to 1 10	. . . .
William Connell & Co., ...	388	231	619	10	309	2 80	1 65	1 15	. . . .
Hillside Coal and Iron Company,	700	272	972	10	225	1 73	1 32	95 to 1 10	. . . .
Roaring Brook Coal Company, . .	200	115	315	10	120	. . . .	1 40 to 1 52	1 15	. . . .
	5,626	2,310	7,936						
Luzerne county :									
Upper Lehigh, ...	392	94	486	10	132	2 50	1 70	1 00	. . . .
Franklin, ...	236	89	325	. . . .	. . . .	2 25	. . .	1 15	. . . .
Council Ridge, ...	286	74	360	10	196	2 57	1 70	1 00	. . . .
Humboldt, ...	58	29	87	. . . .	82	. . . .	1 70	1 18	$0 75
Butler, ...	109	92	201	10	. . . .	*52 c.	*18 c.	1 10	65
Seneca, Ravine, and Twin, ...	248	202	450	10	133¾	2 25	. . . .	1 15 to 1 20	
Mount Pleasant, ...	101	43	144	. . . .	95½				
Hollenback Mines, ...	64	7	71	9	110	. . . .	. . .	1 14	. . . .
Kingston, ...	581	110	691	. . . .	130 to 135	2 50	1 37 to 1 75	1 00 to 1 25	. . . .
Hillman, ...	130	. . . .	130	. . . .	104	1 70 to 2 25	1 70	1 15	. . . .
East Sugar Loaf, ...	473	138	611	10	149	. . . .	1 68	1 09	55
Cross Creek, ...	658	108	766	10	. . . .	2 45	1 70	1 00	. . . .
Susquehanna Coal Company, . . .	469	164	633	10	181	2 25	2 00	1 15 to 1 50	. . . .
Susquehanna Coal Company, . .	230	102	332	7	117	. . . .	1 68	1 15	. . . .
Susquehanna Coal Company, . . .	498	117	615	10	121	2 25	1 68	1 15 to 1 58	. . . .
Hollywood.	194	51	155	10	119				
A. Pardee & Co., ...	878	55	933						
Latimer, ...	259	41	300	10	200	1 70	. . . .	1 00 to 1 60	. . . .
Pennsylvania Coal Company, . . .	1,971	695	2,666	10	194	1 75	1 50 to 1 87	1 00 to 1 25	. . . .
Dunmore, ...	262	104	366	10	190	1 87 to 1 93	1 45 to 1 70	85 to 1 15	. . . .
Salem, ...	175	22	197	10	180	. . . .	1 36	1 25	. . . .
	8,182	2,337	10,519						

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* Per ton.

† Per month.

WAGES.

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh master.	Engineer.
$1 50	....	$1 75	$1 70	$1 17	$0 90	$1 50	$1 00	$1 17	$0 75	$0 50	....	$1 50	
1 35	....	1 60	1 60	1 20	90	1 20	90	1 35	75	50	$3 50		
1 27	....	1 70	1 70	....	59	....	80 to 1 11	1 15	80	31 to 41	3 38	1 25	$3 20
1 28	....	1 80	1 65	....	65	1 38	90	1 15	1 15	45	3 00	50	3 00
1 27	...	1 70	1 70	....	59	....	80 to 1 11	1 15	80	30 to 50	†46 00 to 76 00	1 25	†100 00
1 25	....	2 00	....	....	1 00	....	80	....	...	40	3 33¼		
1 42	....	1 60	1 55	1 15	85	1 42	1 20	1 15	87	50	4 00	....	2 50
1 31	....	1 75	1 70	..	65		95	1 15	1 05	30	5 00	....	7 00
1 46	$0 65	1 60	1 46	1 15	75	1 46	...	1 15	85	83	†50 00 and 100 00		
1 40	....	1 50	....	1 50	83	1 42	1 12	1 15	1 00	48			
1 35	....	2 12½	1 65	1 40	90	1 60	80	1 00	..	40	....	1 50	
1 20 to 1 45	...	1 89 to 2 00	1 20 to 1 60	60 to 1 00	.	....	52	1 20	..	47	2 10 to 3 85	1 75 to 2 00	
2 00	....	1 75	1 65	1 00	....	1 14	....	1 26	...	39	3 00	1 75	
1 25 to 1 60	....	1 45 to 1 90	1 80 to 2 10	....	69 to 90	96 to 1 15	69 to 90	1 00 to 1 15	63 to 81	40 to 55	†70 00	†37 50	
1 50	....	1 75	..	1 10	....	...	80 to 1 25	1 15	40 to 60	40			
1 33	60	1 61 to 2 00	1 45	1 10	75	1 34	1 02	70 to 1 00	90	42	....	....	1 54
1 45	....	1 60	....	1 28	....	1 45	85	1 20	1 02¼	65	....	....	1 56
1 28 to 1 70	....	1 40 to 1 85	1 40 to 1 85	1 15	79	1 25 to 1 45	82 to 1 10	1 26	79 to 97	40 to 70	†75 00 to 90 00		
1 47	....	1 75	1 85	1 30	1 00	....	82 to 1 22	75 to 1 50	79	60	3 00	1 75	
1 40 to 1 54	....	1 58 to 2 25	1 68 to 1 75	1 30	79	1 40	82 to 92	1 18 to 1 25	79	40 to 70	†90 00	....	2 50
1 46	....	1 60 to 2 00	1 46 to 2 00	1 05 to 1 60	....	1 00 to 1 46	...	....	90 to 1 00	30 to 70			
1 20 to 1 28	....	1 20 to 2 30	1 10 to 1 75	....	70	....	78	1 15	...	30 to 68	....	1 25 to 1 75	†100 00
1 15 to 1 20	...	1 50 to 1 55	1 40 to 1 55	80 to 1 50	....	....	80 to 90	1 15	....	30 to 40	3 00	1 15 to 1 75	†100 00
1 10	....	1 50	....	75	75	85	85	....	....	40	....	75	

COAL, ANTHRACITE—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Northumberland County:									
Henry Clay, No. 1,	211	64	275	10	214	$1 60	. . . .	$1 00	. . . .
Peerless,	132	44	176	10	150	. . . .	$0 45 to 1 33	1 08	. . . .
Stirling,	163	52	215	10	165	1 60	. . . .	1 00	. . . .
Mineral Railroad and Mining Co.,	254	70	324	10	189	1 58	. . .	1 00	. . . .
Cameron,	430	50	480	10	189	1 58	. . . .	1 10	. . . .
Hickory Ridge,	89	56	145	10	149	1 50	. . . .	1 00	. . . .
Stuartville,	144	106	250	10	225	2 50	. . . .	1 25	. . . .
Buck Ridge,	169	81	250	10	250	1 25	1 25	1 00	. . . .
Excelsior,	169	68	237	10	225	1 45	. . . .	1 12	. . . .
Ben Franklin,	112	34	146	10	160	. . . .	. . . .	1 00	. . . .
Locust Gap,	151	99	250	10	165	2 00	. . . .	1 50	. . . .
Enterprise,	182	47	229	10	156	1 84	. .	1 00	. . . .
Packer,	17	13	30	10	140	. . . .	2 00	1 50	. . . .
	2,214	793	3,007						
Schuylkill County:									
S. M. Heaton,	175	90	265	10	162	1 75	. . . .	. . . .	. . . .
Koh-i-noor,	253	77	330	10	152	2 30	1 70	1 25	. . . .
John C. Hayden,	173	62	235	10	90	1 00 to 4 50	1 55 to 1 75	1 08 to 1 35	$0 83 to 1 12
Cambridge Coal Company,	24	3	27	10	145	. . . .	*11 70	*8 00	. . . .
Ellsworth,	44	19	63	10	176	1 75	. . . .	1 00	. . . .
William Penn,	156	114	300	10	160	2 00	1 65	1 25	. . . .
Stafford's,	30	. . . .	30	10	152	1 80	. . . .	1 33	. . . .
Bear Run,	130	66	196	10	. . . .	2 38	2 50	1 50 to 2 16	66 to 1 16
York Farm,	6	. . . .	6	. . . .	11 mos.	6 41	2 49	1 83	. . . .
St. Nicholas,	185	. . . .	185	10	159	1 50 to 3 00	2 50	1 35 to 1 58	. . . .
Lawrence,	124	99	223	10	178	. . . .	1 72	1 22	. .
Draper,	147	70	217	10	264	2 55	1 73	1 26	86
Kehley's Run,	264	163	427	10	172	2 10	1 75	1 40	. . . .
Gilberton,	146	63	209	10	341	2 71	1 73	1 26	. . . .
Middle Lehigh,	400	. . . .	400						
Kalmia,	203	81	284	10	264	1 85	1 69	1 15	. . . .
	2,490	907	3,397						

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* Per week.

WAGES—*Continued.*

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
$1 20	$1 00	$1 65	$1 65	....	$0 83	....	$1 10	$1 00	$0 43	....	$3 20		
1 08	....	1 33	....	$0 65	65	$1 08	....	....	75	$0 45	2 00		
1 20	1 00	1 65	....	....	83	....	1 10	1 00	....	43	3 20		
1 29	....	1 50	1 68	....	85	....	1 00	1 01	....	65	2 64		
1 25	....	1 58	1 50	....	80	....	1 20	1 04	....	65	2 64		
1 25	....	1 29	....	....	66	....	1 04	1 00	....	62	2 33		
1 35	....	2 00	....	....	1 10	....	1 00	....	....	60	3 25	....	$3 00
1 08	....	1 25	66	....	83	....	....	1 25	50	50	2 00		
1 25	....	1 58	....	....	83	1 65	60	....	81	50	6 00	....	1 45
1 06	....	1 25	1 50	80	....	1 17	....	1 15	....	25	3 60	....	3 60
to		to	to	to						to			
1 15		1 50	1 91	1 06						80			
1 70	....	2 00	1 75	....	1 00	1 25	1 00	1 40	80	60			
1 08	58	1 33	1 33	1 00	67	1 16	83	1 08	67	25–58	5 00	....	1 38
....	....	....	....	....	....	....	....	....	....	50	....	....	1 50
1 25	....	1 37	1 50	1 25	....	1 50	....	....	....	50	3 00		
1 38	....	1 75	1 75	1 25	80	1 35	1 00	....	80	60	4 00	....	†200 00
1 33	....	1 60	1 60	....	80	1 33	1 00	....	80	30	....	....	1 50
to		to	to		to	to	to		to	to			to
1 50		2 00	1 80		90	1 50	1 35		90	75			1 80
*10 20	....	*12 00	....	....	....	*10 20	....	....	....	*3 75			
1 25	....	1 50	....	....	80	....	80	....	....	50	4 00		
1 40	....	2 00	2 00	....	1 00	1 25	....	1 50	....	1 00	4 00		
1 80	....	2 00	..	....	....	1 25	....	....	....	70			
1 70	71	2 00	1 85	....	1 00	1 63							
to		to	to										
1 85		2 25	2 00										
92	....	1 17											
1 70	....	2 00	1 25	....	1 41	....	....	1 75	1 50	1 00			
to		to	to		&				to	&			
2 13		2 16	2 33		1 33				1 16	50			
1 46	....	1 80	....	....	93	...	1 07	1 52	....	64	4 16		
1 52	....	1 64	2 20	....	93	1 46	1 15	1 16	1 08	58			
1 49	....	1 77	1 95	....	75	1 49	....	....	....	67			
1 52	....	1 64	2 07	....	93	1 46	1 15	1 26	1 08	58			
1 47	....	1 61	1 69	....	63	....	92	....	58	54	3 81		

† Per month.

COAL, ANTHRACITE—Employees, Production, and Value.

NAME OF COLLIERY, OR PERSONS OPERATING SAME.	Post Office Address.	Mine—Where Located.	Number of tons mined.	Value.	Whole number of persons employed.	Capital employed in business.	Amount paid annually for wages.	Amount paid for materials used in business.
Anchor,	Phila. & Read. Coal & Iron Co.,	Schuylkill county,	......	......	2	......	$1,091	$40
Bast,	do. do.	Schuylkill county,	86,463	$135,746	307	......	84,104	27,738
Bear Valley,	do. do.	Northumberland county,	75,719	145,380	249	......	69,805	16,174
Boston Run,	do. do.	Schuylkill county,	5,878	9,228	80	......	24,183	9,703
Beechwood,	do. do.	Schuylkill county,	75,820	119,038	339	......	85,107	21,093
Buckville,	do. do.	Schuylkill county,	......	......	1	......	410	
Burnside,	do. do.	Northumberland county,	33	......	60	......	16,109	3,478
Conner,	do. do.	Schuylkill county,	83,308	130,793	284	......	74,622	210,427
Colket,	do. do.	Schuylkill county,	29,860	62,108	179	......	39,185	10,855
Ellengowen,	do. do.	Schuylkill county,	14,652	23,003	170	......	50,706	48,066
Elmwood,	do. do.	Schuylkill county,	55,602	87,295	196	......	49,049	10,491
Eagle Hill Shaft,	do. do.	Schuylkill county,	66,982	105,161	250	......	66,597	17,192
East Franklin,	do. do.	Schuylkill county,	3,016	6,273	27	......	15,700	9,473
Forestville,	do. do.	Schuylkill county,	5,312	8,339	173	......	8,475	1,818
Girard,	do. do.	Schuylkill county,	73,003	114,614	224	......	64,837	16,272
George Fales,	do. do.	Northumberland county,	5,804	11,143	92	......	6,206	2,248
Glendower,	do. do.	Schuylkill county,	54,332	85,302	241	......	62,911	14,869
Helfenstine,	do. do.	Northumberland county,	11	......	5	......	2,703	1,986
Hammond,	do. do.	Schuylkill county,	101,966	160,086	236	......	76,597	23,211
Henry Clay,	do. do.	Northumberland county,	......	......	2	......	729	
Indian Ridge,	do. do.	Schuylkill county,	122,368	192,117	453	......	106,690	22,412
Keystone,	do. do.	Schuylkill county,	56,721	89,051	216	......	56,702	15,072
Knickerbocker,	do. do.	Schuylkill county,	104,882	164,664	259	......	75,420	12,806
Locust Spring,	do. do.	Northumberland county,	43,094	67,657	274	......	54,878	24,296
Locust Run,	do. do.	Columbia county,	41,450	65,076	189	......	40,685	9,290
Mount Carmel Shaft,	do. do.	Northumberland county,	122,455	192,254	481	......	122,240	20,242
Merriam,	do. do.	Northumberland county,	85,501	124,236	334	......	100,166	20,293
Mahanoy City,	do. do.	Schuylkill county,	86,227	135,376	294	......	82,770	23,027
Mine Hill Gap,	do. do.	Schuylkill county,	61,467	96,503	331	......	81,038	21,078
Middle Creek Shaft,	do. do.	Schuylkill county,	5,369	11,165	150	......	12,550	2,583
North Franklin, No. 1,	do. do.	Northumberland county,	4,677	7,342	6	......	5,779	1,949
North Franklin, No. 2,	do. do.	Northumberland county,	47,962	75,200	204	......	41,386	10,781
North Ashland,	do. do.	Columbia county,	71,376	112,060	243	......	70,164	27,346
North Mahony,	do. do.	Schuylkill county,	70,045	109,970	269	......	58,792	14,920

Newkirk,	do.	do.	Schuylkill county,			1		485	
Otto,	do.	do.	Schuylkill county,	66,253	104,017	319		79.042	13,739
Potts,	do.	do.	Columbia county,	81,516	127,980	305		82,809	26,148
Preston, Nos. 1 and 2,	do.	do.	Schuylkill county,	80,585	126,518	346		91,967	27,113
Preston, No. 3,	do.	do.	Schuylkill county,	38,690	60,602	227		54,294	20,148
Plank Ridge,	do.	do.	Schuylkill county,	80,679	126,666	208		74,017	18,191
Pottsville,	do.	do.	Schuylkill county,	2,574	4,041	86		48,292	10,063
Pine Forest,	do.	do.	Schuylkill county,	41,741	65,533	206		54,830	16,268
Pine Knot,	do.	do.	Schuylkill county,			2		1,010	55
Phœnix Park, No. 2,	do.	do.	Schuylkill county,	2		40		11,067	2,002
Phœnix Park, No. 3,	do.	do.	Schuylkill county,	11,008	17,392	75		20,673	7,055
Pyne,	do.	do.	Schuylkill county,	17,846	28,196	138		25,779	5,725
Rainbow,	do.	do.	Schuylkill county,			9		4,176	1,021
Richardson,	do.	do.	Schuylkill county,	70,192	110,201	307		74,591	18,587
Reliance,	do.	do.	Northumberland county,	724		7		1,411	360
Schuylkill,	do.	do.	Schuylkill county,	34,540	54,227	127		28,914	7,544
Shenandoah City,	do.	do.	Schuylkill county,	30,234	47,467	213		33,235	8,995
Tunnel,	do.	do.	Schuylkill county,	66,296	104,084	227		65,711	18,330
Thomaston,	do.	do.	Schuylkill county,	69,171	108,598	333		83,308	22,559
Taylorsville,	do.	do.	Schuylkill county,			1		1,957	527
West Brookside,	do.	do.	Schuylkill county,	282,261	547,592	687		192,090	39,929
Wadesville Shaft,	do.	do.	Schuylkill county,	22,583	35,455	112		48,690	26,165
West Shenandoah,	do.	do.	Schuylkill county,	69,413	109,025	281		66,738	13,371
				2,728,444	$4,613,775	10,959		$2,744,581	$174,884

COAL, ANTHRACITE—

NAME OF COLLIERY.	Number of men employed.	Number of boys employed.	Total number of men and boys employed.	Hours worked per day.	Days in operation.	Miners on contract.	Miners on wages.	Outside laborers—men.	Outside laborers—boys.
Philadelphia and Reading Coal and Iron Company:									
Anchor,	2	...	2	10	...	...	...	$1 30	...
Bast,	223	84	307	10	172	$1 50 to $2 74	$1 86	1 31	$0 86
Bear Valley,	148	101	249	10	169	67 to 2 80	1 65	1 23	92
Boston Run,	63	17	80	10	24	...	1 71	1 25	...
Beechville,	253	86	339	10	166	1 07 to 2 81	1 77	1 30	72
Buckville,	1	...	1	10	...	...	...	1 33	
Burnside,	59	1	60	10	...	...	1 65	1 23	99
Connor,	192	92	284	10	173	1 39 to 3 27	1 58	1 25	90
Colket,	117	62	179	10	147	81 to 3 16	1 80	1 27	63
Ellengowen,	164	6	170	10	25	1 07 to 4 46	1 80	1 31	...
Elmwood,	130	66	196	10	165	95 to 2 89	1 85	1 31	...
Eagle Hill Shaft,	181	69	250	10	185	1 05 to 2 86	1 80	1 33	77
East Franklin,	26	1	27	10	20	...	1 80	1 31	90
Forestville,	136	37	173	10	34	1 52	1 60	1 15	...
Girard,	137	87	224	10	194	1 69 to 3 69	1 80	1 29	94
George Fales,	72	20	92	10	19	1 93	1 38	1 10	...
Glendower,	165	76	241	10	164	1 06 to 2 59	1 80	1 33	82
Helfenstein,	5	...	5	10	...	...	1 80	1 33	...
Hammond,	148	88	236	10	200	1 52 to 3 52	1 72	1 29	97
Henry Clay,	2	...	2	10	...	...	...	1 33	
Indian Ridge,	313	140	453	10	180	92 to 3 46	1 79	1 26	84
Keystone,	134	82	216	10	158	1 66 to 2 96	1 82	1 28	97
Knickerbocker,	153	106	259	10	167	64 to 2 12	1 80	1 31	90
Locust Spring,	175	99	274	10	111	57 to 2 77	1 80	1 28	90
Locust Run,	115	74	189	10	163	2 06 to 2 45	1 80	1 28	79
Mount Carmel Shaft,	311	170	481	10	163	1 15 to 2 35	1 80	1 26	92
Merriam,	234	100	334	10	178	1 01 to 3 27	1 75	1 28	...
Mahanoy City,	189	105	294	10	185	1 08 to 3 17	1 70	1 31	...
Mine Hill Gap,	221	110	331	10	169	1 57 to 3 53	1 75	1 28	84
Middle Creek Shaft,	113	37	150	10	31	1 62 to 2 72	1 58	1 14	73
North Franklin, No. 1,	6	...	6	10	27	...	...	1 25	...
North Franklin, No. 2,	144	60	204	10	117	60 to 2 61	1 73	1 26	89
North Ashland,	159	84	243	10	176	1 20 to 3 39	1 75	1 23	94
North Mahanoy,	179	90	260	10	154	68 to 3 61	1 80	1 30	90
Newkirk,	1	...	1	10	...	...	...	1 33	
Otto,	222	97	319	10	168	1 37 to 2 97	1 80	1 27	76
Potts,	199	106	305	10	171	1 41 to 3 42	1 78	1 23	90
Preston, Nos. 1 and 2,	234	102	336	10	172	1 33 to 3 85	1 74	1 25	68
Preston, No. 3,	157	70	227	10	140	1 35 to 3 26	1 70	1 26	90
Plank Ridge,	146	62	208	10	176	91 to 2 81	1 71	1 28	75
Pottsville,	80	6	86	10	8	1 88 to 2 32	1 75	1 23	75
Pine Forest,	157	49	206	10	151	1 19 to 3 31	1 60	1 23	67
Pine Knot,	2	...	2	10	...	...	...	1 33	
Phœnix Park, No. 2,	36	4	40	10	2	62 to 1 32	1 80	1 34	60
Phœnix Park, No. 3,	63	12	75	10	71	96 to 1 19	1 80	1 31	85
Pyne,	97	41	138	10	130	1 39 to 2 22	1 80	1 25	53
Rainbow,	9	..	9	10	...	...	...	1 42	...
Richardson,	213	94	307	10	159	1 03 to 3 33	1 71	1 27	81
Reliance,	7	..	7	10	...	...	...	1 26	...
Schuylkill,	89	38	127	10	140	1 15 to 3 37	...	1 26	90
Shenandoah City,	130	83	213	10	89	66 to 3 17	1 80	1 25	90
Tunnel,	148	79	227	10	174	1 86	1 86	1 28	90
Thomaston,	218	115	333	10	130	80 to 2 51	1 80	1 29	77
Taylorsville,	1	...	1	10	...	...	...	1 33	
West Brookside,	513	174	687	10	180	1 26 to 3 90	1 76	1 33	77
Wadesville,	93	19	112	10	51	1 89	1 65	1 27	73
West Shenandoah,	161	120	281	10	174	96 to 2 82	1 70	1 25	83
	7,547	3,412	10,959						

WAGES—*Continued.*

Inside laborers—men.	Inside laborers—boys.	Outside mechanics—men.	Inside mechanics—men.	Outside mule drivers—men.	Outside mule drivers—boys.	Inside mule drivers—men.	Inside mule drivers—boys.	Dumpers.	Slate pickers—men.	Slate pickers—boys.	Mining overseers.	Weigh-master.	Engineer.
....	....	....	....	....	....	....	....	....	....	....	$1 85		
$1 58	$0 78	$1 68	....	$1 28	....	$1 41	...	$1 22	$1 05	$0 61	2 64		
1 37	86	1 67	....	1 43	$0 68	1 11	...	1 20	...	52	2 72		
1 53	....	1 80	....	1 35	....	....	....	....	....	59	3 14		
1 55	78	1 74	....	1 50	79	1 31	$0 98	1 25	....	45	2 88		
1 35	....	1 69	....	1 50	....	...	....	....	....	....	2 81		
1 53	65	1 61	....	1 38	91	1 27	85	1 29	....	63	3 15		
1 57	65	1 77	....	1 50	77	1 52	75	1 05	....	40	2 69		
1 53	80	1 70	....	1 48	75	1 31	..	...	....	....	3 02		
1 52	71	1 68	....	1 50	97	1 16	91	1 35	....	58	3 21		
1 53	45	1 66	....	1 35	90	1 53	97	1 22	....	47	2 59		
1 53	....	1 85	....	1 35	....	....	....	....	....	....	3 28		
1 36	....	1 42	....	1 02	80	1 36	83	1 26	....	53	3 58		
1 59	84	1 74	....	1 44	95	1 46	79	....	1 05	65	2 87		
1 18	76	1 35	....	....	65	1 05	....	....	....	51	2 65		
1 56	71	1 64	....	1 40	77	1 45	90	1 28	....	50	2 50		
1 53	....	....	....	....	....	....	....	....	....	....	2 68		
1 60	64	1 69	....	1 50	83	1 48	96	1 22	....	62	2 89		
1 53	72	1 71	....	1 50	83	1 21	87	1 29	....	65	3 06		
1 69	83	1 73	....	1 15	97	1 40	....	99	1 05	61	2 73		
1 55	71	1 65	....	1 50	85	1 13	....	1 21	....	63	3 23		
1 53	81	1 67	...	1 44	90	1 31	....	1 20	1 20	60	2 91		
1 56	68	1 61	....	....	76	1 31	95	1 05	....	58	3 14		
1 53	72	1 70	....	1 50	97	1 35	98	1 28	....	65	2 73		
1 57	86	1 67	....	1 43	90	1 29	86	....	....	60	2 50		
1 55	66	1 67	....	1 50	85	1 22	90	1 28	....	59	2 82		
1 58	68	1 65	....	1 50	75	1 19	91	1 20	....	52	2 67		
1 37	56	1 60	....	1 31	50	1 06	78	1 20	....	40	2 90		
....	....	1 81	....	1 35									
1 42	83	1 47	....	1 40	86	1 25	90	1 27	....	51	3 18		
1 55	64	1 66	....	1 28	86	1 37	97	1 22	....	59	3 29		
1 55	52	1 71	....	1 50	83	1 20	90	1 42	....	59	3 15		
1 45	81	1 72	....	1 35	84	1 53	90	1 35	....	50	2 60		
1 69	83	1 74	....	1 42	68	1 41	98	1 20	....	60	2 70		
1 57	71	1 74	....	1 32	86	1 36	83	1 27	...	61	2 93		
1 57	71	1 74	....	1 23	90	1 38	....	1 29	....	55	2 67		
1 51	72	1 68	....	1 50	83	1 12	....	1 28	...	54	3 13		
1 52	....	1 80	....	1 20	75	1 20	90	....	...	....	3 59		
1 55	71	1 78	....	1 65	75	1 17	....	1 28	....	49	2 53		
....	75	1 74	....	1 35	....	....	81	....	....	....	2 67		
1 53	....	1 75	....	1 39	....	....	....	....	....	55	3 28		
1 53	71	1 70	....	1 35	63	....	90	....	....	48	2 77		
....	....	1 76	....	1 33									
1 58	70	1 70	....	1 28	90	1 31	92	1 13	....	52	2 67		
....	....	1 51	....	1 35	....	....	....	....	....	....	3 00		
1 55	....	1 63	...	1 35	75	1 21	90	1 27	....	58	3 00		
1 52	72	1 73	....	1 40	86	1 21	72	1 21	....	59	2 79		
1 67	79	1 67	...	1 31	60	1 33	88	..	....	58	2 75		
1 58	71	1 73	....	1 21	79	1 25	92	1 35	....	53	2 57		
1 53	68	1 72	....	1 50	83	1 41	91	1 28	....	55	2 96		
1 54	68	1 72	....	1 40	64	....	....	....	....	50	3 07		
1 53	72	1 76	....	1 50	85	....	95	1 35	....	59	2 74		

TONNAGE FROM COLLIERIES *operated by the Philadelphia and Reading Coal and Iron Company.*

NAME OF COLLIERY.	1874.	1875.	11 months ending Nov. 30. 1876.	Year ending Nov. 30, 1877.	Year ending Nov. 30, 1878.
Anchor,	5,776 11	19,664 05	29,875 15	2,076 11	
Bast,	52,340 13	72,121 16	73,641 14	118,911 09	86,462 11
Beechwood,	74,333 09	44,769 18	57,617 07	103,192 00	75,821 00
Boston Run,	62,537 19	39,084 13	45,190 18	68,598 06	5,878 08
Buckville,	27,527 09	16,812 02			
Burnside,					33 05
Bear Valley,				1,328 10	75,719 04
Colket,				24,726 00	29,859 16
Conner,			16,911 16	99,194 16	83,308 02
East Franklin,	26,999 19	26,340 00	27,641 08	48,367 02	3,016 02
Ellangowan,	77,035 18	53,984 14	78,089 06	145,866 10	14,651 13
Elmwood,	18,361 04	25,740 03	33,957 04	65,260 15	55,601 19
Eagle Hill,		26,953 05	34,547 02	32,219 06	66,981 17
Forestville,	23,878 16	33,737 11	21,382 17	49,317 13	5,312 03
Girard,			6,057 06	93,185 05	73,002 11
George Fales,				279 03	5,803 17
Glendower,	13,217 11	24,322 03	23,600 19	58,497 17	54,332 16
Helfenstein,	2,700 09	15,974 11	15,700 02	37,366 09	11 00
Hillside,	2,274 03				
Hammond,			27,676 16	119,694 13	101,966 07
Indian Ridge,	120,763 05	98,569 02	96,092 01	155,131 13	122,368 04
Keystone,	12,926 15	23,647 18	27,003 17	79,143 05	56,720 16
Knickerbocker,	10,313 12	64,593 05	99,661 12	133,923 01	104,882 05
Live Oak,	2,020 09				
Locust Run,	25,479 05	43,053 03	47,502 03	80,949 00	41,450 03
Locust Spring,	13,920 01	31,864 08	21,684 04	72,623 10	43,094 05
Mahanoy City,	127,006 02	51,402 02	60,828 19	117,293 12	86,227 05
Merriam,	59,908 17	86,630 10	105,758 17	136,073 10	85,500 14
Mt. Carmel Shaft,	3,176 07	21,076 09	70,431 05	148,305 10	122,454 16
Mine Hill Gap,	58,487 08	53,926 14	74,157 11	105,213 05	61,466 16
Middle Creek Shaft,		9,025 02	24,927 05	31,361 15	5,368 10
North Franklin, No. 1,	26,545 11	37,053 15	36,016 10	41,773 09	4,677 00
North Franklin, No. 2,	39,353 15	43,516 04	123 00	73,959 17	47,961 17
North Ashland,				11,460 13	71,375 15
North Mahanoy,	33,356 02	40,080 12	45,223 16	86,886 08	70,045 01
Oakdale,	21,288 06	31,278 16			
Otto,	1,574 15	35,694 03	26,294 11	89,989 09	66,252 12
Phœnix Park, No. 2,	35,470 06	27,060 15	25,001 06	31,769 06	2 00
Phœnix Park, No. 3,					11,007 17
Pine Forest,	58,556 19	26,910 00	31,537 19	53,073 06	41,741 06
Pottsville,		1,810 08	25,020 19	48,501 09	2,574 07
Pine Knot,		2,202 04			
Plank Ridge,	131,133 02	81,737 03	90,656 13	118,819 08	80,679 00
Potts,	51,745 07	40,910 12	38,527 00	103,806 15	81,515 14
Preston, No. 1,	4,409 03	8,219 12	16,908 00	37,718 02	5,260 06
Preston, No. 2,	20,146 16	39,568 13	26,495 01	76,374 12	75,324 12
Preston, Nos. 3 and 4,	8,457 18	16,536 14	38 10	22,019 11	38,600 10
Rainbow,	1,579 19				
Reliance,					724 09
Richardson,		4,906 15	6,898 18	62,238 16	70,192 00
Schuylkill,				231 10	34,539 19
Shenandoah City,					30,234 02
South Pyne,				11,928 14	17,846 04
Thomaston,	16,573 07	41,104 08	60,631 04	81,543 16	69,171 04
Tunnel,	38,733 13	50,072 02	66,311 01	100,735 03	66,296 09
West Brookside,	54,668 04	68,547 02	154,543 13	369,573 07	282,264 00
West Shenandoah,	10,211 11	30,068 19	59,749 04	93,761 08	69,442 15
West End,				2 00	
Wadesville Shaft,			23,448 12	150,261 11	22,582 17
	1,374,790 16	1,510,572 11	1,853,364 01	3,794,528 16	2,727,608 01
Tonnage from leased collieries on lands owned and controlled by the Philadelphia and Reading Coal and Iron Company, as per Statement B,	1,802,370 18	1,594,740 18	1,218,533 03	1,389,108 07	1,100,181 00
Total tonnage,	3,177,161 14	3,105,313 09	3,071,897 04	5,183,637 03	3,827,789 01

TONNAGE *of Leased Collieries from Lands owned and controlled by the Philadelphia and Reading Coal and Iron Company.*

Collieries.	Operators.	1874.	1875.	1876. 11 mos. ending Nov. 30.	1877. Year ending Nov. 30.	1878. Year ending Nov. 30.
Kalmia,	Phillips & Sheafer,	61,169 16	82,778 12	55,555 08	99,887 09	98,398 12
Rausch Creek,	Miller, Graeff & Co.,	60,686 17	30,172 17	38,535 12	32,146 13	54,936 18
Lincoln,	Levi Miller & Co.,	52,480 17	90,767 13	62,498 18	74,188 08	96,206 10
Swatara,	John D. Felty,	. . . .	1,103 11	541 14	609 15	256 14
Pyne,	J. Claude White,	44,457 03	9,165 03	17,562 15	10,319 00	
Lewis tract,	James O'Malley,	874 05	209 15	69 10	45 10	34 10
Diamond,	William H. Whittaker & Co.,	26,284 03	9,109 03	19,357 02		
Lewis tract,	Seth W. Geer,	719 00	606 04	230 00	127 10	162 00
White Oak,	J. H. Denning & Bro.,	8,984 17	10,058 12	7,542 01	5,952 19	551 13
Ellsworth,	John R. Davis,	8,929 14	15,551 13	9,595 01	5,856 08	13,050 04
Gettle & Wagner tract,	W. & J. S. Heffner,	471 17	496 12	353 13	307 06	357 07
Gettle & Wagner tract,	Levi Reber,	132 00	129 00	115 00	37 00	
Chandler tract,	Patrick Keenan,	98 00	71 10	145 00	249 15	137 00
Lee Lands tract,	Schuylkill Iron Company,	1,549 11	263 01	12 14		
Chandler tract,	William Lloyd,	68 15	115 00	115 00	39 10	16 00
Chandler tract,	Edward McGovern,	92 00	60 10	75 00	16 15	51 10
Monitor,	J. H. Denning & Co.,	20,516 05	5,252 07	3,394 17	2,457 19	2,172 18
Wadesville Shaft,	Hickory Coal Company,	120,573 15	84,283 19	25,361 16		
Diamond,	Berluchy & Co.,	5,503 05	6,567 09	457 05	181 00	
Eagle,	G. W. Johns & Bro.,	85,515 02	50,828 14	43,389 02	46,221 14	26,083 08
St. Clair,	Adam Jackson *et al.*,	4,898 10	5,969 02	1,998 05	491 11	809 02
Keim & Repp,	Edward York,	71 00	234 10	41 00		
Kentucky,	Schall & Donohoe,	9,099 01	4,318 19	412 06		
Alaska,	Alaska Coal Company,	14,496 15	26,699 17	82 08	67 18	
Hartford,	Richard Philips & Co.,	9,833 13	23,982 03	8,113 03	1,504 18	7,842 18
Staffordshire,	Jones, Ward & Oliver,	9,107 16	11,072 18	7,458 16	7,791 05	9,459 05
Tunnel Ridge,	George W. Cole,	80,822 03	56,997 15	37,132 07	30,340 00	42,920 01
St. Nicholas,	St. Nicholas Coal Company,	73,826 04	42,838 09	46,231 11	91,023 16	64,558 05
Suffolk,	Suffolk Coal Company,	36,550 18	23,245 08	41,990 05	60,805 05	71,002 00
Bear Run,	Wiggan & Triebels,	69,769 16	52,915 17	57,651 12	82,409 03	66,632 11
Shenandoah,	James Neill, trustee,	63,609 11	58,247 14	45,855 04	46,203 18	2,195 15
Enterprise,	J. R. Cleaver & Co.,	16,175 03	11,008 19	8,373 09	69 01	
Ashland estate,	A. Bancroft,	644 17	1,578 03	920 06	191 00	100 00
Ashland estate,	Vaughn & Jones,	1,790 05	2,187 15	1,302 05	1,646 05	1,391 09
Locust Gap,	Graeber, Kempel & Co.,	23,211 18	12,231 15	21,114 15	18,272 12	9,205 01

TONNAGE *of Leased Collieries, &c.—Continued.*

COLLIERIES.	OPERATORS.	1874.	1875.	1876. 11 mos. ending Nov. 30.	1877. Year ending Nov. 30.	1878. Year ending Nov. 30.
Greenback,	Thomas Gorman *et al.*,	363 09	78 14	3,391 13	280 02	1,289 00
Reliance,	Thomas Baumgardner & Co.,	49,391 02	39,714 03	32,478 04	16,207 00	7,078 08
Ben Franklin,	Douty & Baumgardner,	51,152 05	46,905 09	29,374 10	21,334 13	38,622 03
Henry Clay,	J. Langdon & Co.,	22,774 14	58,815 19	51,153 13	71,023 15	7,915 06
Shamokin,	George Tillots & Co.,	511 00	814 00	631 16	304 02	321 18
Franklin,	Lovel, Booth & Co.,	7,622 09	10,667 12	3,914 03	3,844 06	3,528 07
Burnside,	Isaac May & Co.,	53,769 07	108,510 16	54,418 16	60,637 15	2,652 05
Bear Valley,	Heim & Goodwill,	60,154 13	91,977 07	53,722 07	55,632 07	
George Fales',	Heim & Goodwill,	27,971 01	32,576 17	14,190 06	3,970 17	
Taylorsville,	T. H. Schollenberger & Co.,	15,884 01				
Peach Mountain,	W. H. Starr,	10,727 09				
Brookside,	Repplier, Gordon & Co.,	28,584 00				
Colliery No. 2,	McNeal Coal Company,	476 00				
Tower,	Repplier, Gordon & Co.,	59 17				
Manchester,	Altin & Parkin,	1,568 06				
Newkirk,	Fry, Shoemaker & Co.,	52,371 03	130 14			
Tamaqua,	J. W. Krell,	309 05	64 10			
Glentworth,	Diamond Coal Company,	24,589 01				
Cambria,	Lewis & Alkins,	22,396 16				
Eagle Hill,	J. C. Oliver,	29,066 06				
Heckscherville,	John Wadlinger & Co.,	20,524 00				
Munson Williams',	William H. Yohe,	2,156 15	1,182 06	545 15	544 00	367 00
Phœnix Park, No. 3,	Lloyd, Glover & Co.,	21,343 19	16,286 06	22,488 05	22,427 09	
Minersville,	Edward Bradley,	7 00	9 10	5 00		
St. Clair tract,	D. Vipond *et al.*,	100 00	37 00	888 03	229 04	42 16
Ledger Vein,	James Boyce,	15,497 14	12,929 04	11,447 18		
Valley Furnace estate,	Alexander Jennings,	110 09	206 11	53 00	43 10	
Valley Furnace estate,	Patrick McDonald,	63 10	121 00	25 00		
Valley Furnace estate,	J. C. Winlack,	2,562 09	2,743 18	2,339 04	56 06	
Shaft No. 1,	J. C. Winlack *et al.*,	2,638 00	18,588 02	8,879 14	5,390 18	3,621 01
Forester's,	King, Tyler & Co.,	32 00	10,418 04	6,090 13	535 06	
Big Mountain,	Patterson, Llewellyn & Co.,	104,573 16	198,131 04	95,901 00	127,709 04	97,837 06
Valley Furnace estate,	Louis Lorenz,	18 00				
Valley Furnace estate,	Thomas Jennings,	47 15	23 10			
Tamaqua,	Peter Danner,	23 00				

Valley Furnace estate,	John Philips & Co.,	712 09	1,676 15			
West Flowery Field,	Jacob Madara,	....	22 00			
Getile & Wagner,	Thomas Egan & Co.,	....	251 10			
West End,	Owen, Eckel, Colket & Co.,	....	1,527 19	98 19		
Excelsior,	Excelsior Coal Mining Company,	....	4,313 10	4,564 04	8,149 07	21,540 10
Black Mine,	Charles F. King & Co.,	....	....	1,699 18		
Sterling,	Fulton & Kendrick,	....	....	14,471 13	77,764 00	38,599 17
Alaska,	A. A. Raabe,	....	....	....	284 16	486 13
Henry Clay, No. 1,	J. Langdon & Co.,	....	....	....	....	29,010 13
Total from lands of the Philadelphia and Reading Coal and Iron Co,		1,543,167 12	1,389,887 19	976,358 17	1,095,833 00	824,444 14
From Lands controlled by the Philadelphia and Reading Coal and Iron Company.						
Tremont Coal Company.						
Tremont,	Joseph Boden & Laux,	622 10	478 00	291 00	1,549 07	917 17
Rausch Creek,	Miller, Graeff & Co.,	33,438 03	24,238 08	15,764 00	5,737 07	
Colket,	Owen, Eckel, Colket & Co.,	51,505 08	14,627 17	11,209 01		
Eureka,	Owen, Eckel, Colket & Co.,	1,226 06				
West End,	Owen, Eckel, Colket & Co.,	318 19	16,211 08	9,093 19		
		1,630,308 18	1,445,443 12	1,012,716 17	1,103,119 14	825,362 11
Fulton Coal Company.						
Excelsior,	Excelsior Coal Company,	41,413 09	37,528 19	31,112 01	30,626 14	51,471 00
Enterprise,	Enterprise Coal Company,	58,874 18	52,666 06	65,424 03	72,112 19	67,886 10
Greenback,	Guiterman & Gorman *et al.*,	2,204 05	883 03	1,745 08	....	422 09
		1,732,801 10	1,536,522 00	1,110,998 09	1,205,859 07	945,142 10
Locust Gap Improvement Company.						
Monitor,	G. W. Johns & Bro.,	65,049 02	48,634 03	74,418 06	127,292 06	95,126 13
Locust Gap,	Graeber & Shepp,	1,819 03	6,801 10	29,724 08	53,391 01	59,139 17
		1,799,699 15	1,591,957 13	1,215,138 03	1,386,545 17	1,099,409 00
Mammoth Vein and Delaware Coal Companies.						
Small operators,		2,671 03	2,783 05	3,395 00	2,562 10	772 00
Total mined from lands owned and controlled,		1,802,370 18	1,594,740 18	1,218,533 03	1,389,108 07	1,100,181 00

STATEMENT *showing the Tonnage, Expenses, and Average Cost per Ton for*
pany, for the years 1874,

MONTHS.	FOR YEAR 1874.			FOR YEAR 1875.		
	Tonnage.	Expenses.	Cost per ton.	Tonnage.	Expenses.	Cost per ton.
December,	80,212 05	$217,527 71	$2 71.2	82,893 15	$155,419 39	$1 87.4
January,	10,915 04	91.066 26	8 34.3	5,907 14	41,840 96	7 08.2
February,	50,816 07	176,780 49	3 47.9	5,411 09	50,347 84	9 30.4
March,	110,748 12	312,285 86	2 81.9	6,413 17	67,937 75	10 59.2
April,	129,323 10	309,952 99	2 39.6	5,790 09	72,597 08	12 53.8
May,	142,777 00	321,971 28	2 25	9,256 09	83,596 61	9 03.1
June,	145,759 15	319,998 19	2 12.6	92,974 13	215,645 03	2 31.9
July,	64,415 19	211,997 15	3 29	260,312 04	424,431 33	1 63
August,	88,309 17	236,610 80	2 67.9	256,546 12	441,424 95	1 72
September,	158,228 05	352,044 78	2 21.9	266,150 19	452,129 57	1 59.7
October,	226,267 16	450,200 70	1 98.9	290,019 06	447,989 68	1.54.4
November,	167,016 06	364,472 16	2 18.2	228,895 04	368,249 32	1 60.8
Total,	1,374,790 16	$3,364,908 37	$2 44.8	1,510,572 11	$2,821,609 51	$1 86.7

Coal at Collieries worked by the Philadelphia and Reading Coal and Iron Com-
1875, 1876, 1877, and 1878.

FOR ELEVEN MONTHS ENDING NOVEMBER 30, 1876.			FOR TWELVE MONTHS ENDING NOVEMBER 30, 1877.			FOR TWELVE MONTHS ENDING NOVEMBER 30, 1878.		
Tonnage.	Expenses.	Cost per ton.	Tonnage.	Expenses.	Cost per ton.	Tonnage.	Expenses.	Cost per ton.
. . . . . .	. . . .	. . . . .	198,411 14	$219,419 91	$1 10.6	361,829 06	$344,038 73	$0 95.1
42,274 19	$132,015 09	$3 12.2	146,082 05	198,733 45	1 36	96,935 03	230,859 77	2 38.1
26,882 10	133,765 29	4 97.6	133,114 00	229,705 31	1 72.6	65,680 18	205,538 31	3 12.9
49,097 08	183,750 29	3 74.4	205,713 04	310,245 07	1 50.8	89,324 06	193,271 47	2 16.4
208,686 07	309,703 93	1 48.4	324,382 06	353,458 40	1 08.9	189,983 03	240,832 14	1 26.7
206,103 00	276,358 30	1 34	380,714 12	386,974 63	1 01.7	240,057 06	273,676 01	1 14
117,746 16	173,274 47	1 47.1	375,710 10	349,610 54	93	333,193 06	358,308 69	1 07.5
122,469 01	169,276 49	1 38.2	376,249 12	335,370 90	89.1	191,880 03	262,363 97	1 36.7
177,767 02	229,404 88	1 29	420,398 09	418,497 56	99.5	341,129 03	377,853 02	1 10.8
264,637 19	270,664 27	1 02.3	419,602 06	404,810 39	96.5	139,736 11	208,911 29	1 49.5
316,974 14	316,696 11	99.9	441,902 05	419,780 08	95	299,268 02	330,792 24	1 10.5
320,724 05	314,574 12	98	372,247 13	315,925 41	84.9	378,590 14	347,558 08	91 8
1,853,364 01	$2,509,483 24	$1 35.4	3,794,528 16	$3,942,561 71	$1 03.9	2,727,608 01	$3,374,003 72	$1 23.7

ACCIDENTS *at the Collieries worked by the Philadelphia and Reading Coal and Iron Company, for six years, to November 30, 1878.*

YEAR.	Total tonnage.	Total serious accidents non-fatal.	Number of tons mined per serious accident.	Total fatal accidents.	Number of tons mined per fatal accident.	Number of employees.	Total serious accidents non-fatal.	Per cent. serious accidents.	Total fatal accidents.	Per cent. fatal accidents.
1873, ...	1,348,838	132	10,294	44	30,655	5,000	132	$2\frac{64}{100}$	44	$0\frac{88}{100}$
1874, ...	1,374,791	96	14,320	36	38,188	8,000	96	$1\frac{20}{100}$	36	$0\frac{45}{100}$
1875, ...	1,510,572	80	18,882	30	50,352	9,000	80	$0\frac{89}{100}$	30	$0\frac{33}{100}$
1876,*	1,853,364	75	24,711	30	61,778	9,110	75	$0\frac{82}{100}$	30	$0\frac{33}{100}$
1877, ...	3,794,529	185	20,511	45	84,323	11,428	185	$1\frac{61}{100}$	45	$0\frac{39}{100}$
1878, ...	2,727,608	217	12,570	44	61,991	10,630	217	$2\frac{04}{100}$	44	$0\frac{41}{100}$

* Eleven months.

OPERATIONS *of the Beneficial Fund, for the year ending November 30, 1878.*

DR.

1878.
Nov. 30. To disbursements:
Paid 651 contributors, for injuries received, ... $12,012 43
Paid families of 29 contributors killed, 6,886 46
$18,898 89

$18,898 89

CR.

1877.
Nov. 30. By balance, ... $1,348 74
1878.
Nov. 30. By receipts from 7,033 contributors, ... 10,738 75
Interest on amounts in endowment fund:
Coupons maturing May and Nov., . $700 00
Coupons maturing Feb. and August, 800 00
1,500 00
Balance, ... 5,311 40

$18,898 89

1878.
Nov. 30. To balance to the debit of the fund, (advanced by the Philadelphia and Reading Coal and Iron Company,) $5,311 40

ENDOWMENT FUND.

$10,000	Preston Coal and Improvement Company's first mortgage bonds, 7 per cent. interest. May and November.
$10,000	Mammoth Vein Coal and Iron Company's first mortgage bonds, 8 per cent. interest, February and August.

PHILADELPHIA AND READING RAILROAD COMPANY.

The operations of this company are so intimately connected with the anthracite coal trade, that we have arranged the following tables, showing the workings of said road, in the cost of transportation of coal, etc.:

	1875.	1876.	1877.	1878.
Number of passengers carried, ...	6,938,129	10,936,157	6,674,889	6,376,413
Number of tons of coal, 2,240 lbs., . .	5,505,455	5,595,207	7,255,318	5,909,140
Number of tons of merchandise, 2,000 pounds, ...	2,720,208	2,493,277	2,837,647	2,757,839
Number of tons of company's materials. 2,000 lbs , ...	581,948	482,222	313,981	412,110
Total tonnage of company, (2,000 lbs.,) including weight of passengers, and company's materials, ...	10,099,040	10,236,326	11,833,826	10,383,317

Business of the Philadelphia and Reading Railroad, for the year ending November 30, 1878.

TONNAGE.

Coal Transported—Tons of 2,240 pounds.

Where Received.	Bituminous	Anthracite.	Total.
From Broad Top coal region, ...	7,000		
Westmoreland county, and other points west of Huntingdon, ...	170,871		
Total, ...	177,871	. . . . . .	177,871
Lehigh and Wyoming coal:			
At Allentown, ...	. . . . . .	60,662	
Alburtis, ...	. . . . . .	6	
Orcland and Willow Street, ...	. . . . . .	10,884	
Summit, Rupert, and Quakake, ...	. . . . . .	291,312	
Slatington, ...	. . . . . .	12	
Total from Lehigh and Wyoming regions, . .	. . . . . .	362,876	
Main Road:			
From Schuylkill, Northumberland, Columbia, and Dauphin counties, ...	. . . . . .	4,299,773	4,662,549
Total main line and branches, ...	177,871	4,662,649	4,840,520

Number of tons hauled one mile, main road,	359,105,779	
Number of tons hauled one mile, lateral roads,	100,079,025	
Number of tons of coal hauled one mile, total,		459,184,804
Equal to through tons of coal hauled 95 miles,		4,833,524

Merchandise Transported—Tons of 2,000 pounds.

Total merchandise paying freight,		2,757,839
Number of tons of same hauled one mile, main road,	101,582,608	
Number of tons of same hauled one mile branch roads,	49,724,780	
Number of tons of merchandise hauled one mile, total,		151,307,388
Equal to through tons hauled 93 miles,		1,626,961
Materials for use of road, including ballast, timber, rails, sills, stone, brick, &c.,		412,110
Total tonnage of road for year on main road and laterals, including weight of passengers, in tons of 2,000 pounds,		10,383,317
Total amount of coal transported to date, tons of 2,240 pounds,		104,254,361
Total tonnage of road to date, tons of 2,000 pounds,		169,922,102

Passenger Travel.

Total number of passengers during year,	6,376,413
Total number of miles traveled by same,	75,110,715
Equal to, in through passengers over whole length of road,	807,642
Total number of passengers to date,	72,278,223

Receipts of Road.

From freight and tolls on coal,	$7,206,951 58
Freight on merchandise,	2,690,765 54
Passenger travel,	1,526,423 40
Transportation of U. S. mail, and other sources,	115,452 28
Total receipts,	$11,539,952 80

Points of supply and distribution of Anthracite and Bituminous Coal, on the Philadelphia and Reading Railroad and Branches, for the year ending November 30, 1878.

		Paying freight.	Company's use.
Received from Schuylkill Valley branch . . .	63,914.02		
Mill Creek branch, ...	51,172.19		
Mahanoy and Shamokin branch,	1,379,455.07		
Total at Port Carbon, ...		1,494,542.08	119,790.04
Received from Mount Carbon branch, at Mount Carbon, .		60,680.03	11,671.01
Mine Hill and Schuylkill Haven branch, at Schuylkill Haven, ...		1,448,702.07	152,180.10
Lebanon and Tremont branch, at Pine Grove, ...		490,285.08	7,425.00
Little Schuylkill branch, at Tamaqua, . . .		460,105.19	54,389.14
		3,954,316 05	345,456.09
Received from Allentown, Alburtis, and Slatington	60,679.03		
Oreland & Willow street wharf,	10,884 05		
Summit, Rupert and Quakake,	291,312.05		
		362,875.13	
		4,317,191.18	345,456.09
Bituminous received at Harrisburg, Downingtown, Belmont, and New York Junction, ...		174,727.02	3,143.19
Total delivered on main line and branches, ...		4,491,919.00	348,600.08
Passing over laterals for shipment by Schuylkill canal, ...	680,719.13		
Shipped west, *via* Catawissa and Williamsport branch, and Northern Central railway, . . .	286,784.13	. . . .	18,489.19
Consumed on laterals, ...	82,626.11		
		1,050,130.17	
Total paying freight, ...		5,542,049 17	367,090.07
Total for company's use, ...		367,090.07	
Total of all, tons of 2,240 pounds, ...		5,909,140.04	

TABLE *showing the Monthly Receipts, Passengers, and Tonnage of the Philadel*

FROM.	December, 1877.	January, 1878.	Februaty, 1878.	March, 1878.	April, 1878.
Travel,	$132,868 17	$118,198 35	$98,576 26	$120,161 06	$127,515 66
Freight on goods,	259,740 53	243,286 09	191,556 91	257,601 35	231,365 15
Freight and tolls on coal,	804,674 05	240,474 66	183,625 44	271,325 01	535,195 63
United States mail,	3,510 56	3,510 58	3,510 56	3,510 57	3,510 56
Miscellaneous receipts,	5,641 13	5,299 13	4,969 22	6,393 22	6,177 90
	$1,206,434 44	$610,768 81	$482,238 39	$658,991 21	$903,764 90
Number of passengers,	522,026	451,600	399,057	480,114	512,139
TONNAGE.	Tons.	Tons.	Tons.	Tons.	Tons.
Merchandise,	199,543.07	214,824.01	207,455.13	245,380.18	245,438.05
Coal—Main line and branches,	604,765.03	216,577.05	159,507.00	214,422.12	348,972.13
Main line, branches, and laterals,	647,727.03	231,323.11	173,462.01	229,260.00	408,620.09

phia and Reading Railroad Company, for the year ending November 30, 1878.

May, 1878.	June, 1878.	July, 1878.	August, 1878.	September, 1878.	October, 1878.	November, 1878.	Total.
$130,561 89	$133,326 29	$137,677 00	$139,427 36	$140,396 49	$134,516 53	$113,198 34	$1,526,423 40
300,315 31	239,191 30	136,671 98	207,713 46	180,136 20	201,288 07	241,899 19	2,090,756 54
660,730 46	884,928 22	569,284 71	860,206 90	343,993 33	860,243 81	992,269 36	7,206,951 58
3,510 59	3,665 90	3,532 77	3,532 74	3,522 75	2,966 54	3,370 67	41,664 79
6,378 90	6,762 64	6,997 68	6,662 12	6,054 45	6,358 02	6,093 08	73,787 49
$1,101,497 15	$1,267,874 35	$854,164 14	$1,217,542 58	$674,113 22	$1,205,372 97	$1,356,230 64	$11,539,592 80
523,395	589,975	576,077	555,914	623,674	571,250	471,192	6,376,413
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
251,791.06	212,066.05	197,518.03	243,300.01	230,876.02	266,326.00	243,318.10	2,757,838.11
422,633.08	554,203.13	362,618.01	541,508.13	259,087.04	535,436.01	620,787.15	4,840,519.08
013,614.04	754,653.15	440,722.04	683,076.15	327,539.15	695,332.10	803,807.17	5,909,140.04

ANTHRACITE AND BITUMINOUS COAL.—*Where*

	STATIONS.	ANTHRACITE.	
		From Port Carbon.	From Mt. Carbon.
	Port Carbon,		
	Tamaqua,		
	Catawissa and Williamsport Branch,		
	Ringgold,		
	Jonestown,	46 01	
	Union Forge,		8 18
	Mifflin,		
	Dauphin,	11 18	23 02
	Ellendale Forge,		
	Pine Grove,	47 09	
	Pottsville,		
	Landingville,	136 12	107 05
	Auburn,	83 13	74 02
	Port Clinton,		8 19
	Hamburg,	182 08	123 00
	Shoemakersville,	46 05	11 05
	Mohrsville,	485 03	
	Leesport,	4,122 07	77 08
	Tuckerton,	138 08	
	Reading,	75,084 00	2,244 14
	Berks and Lehigh Branch,	2,972 06	215 11
	East Pennsylvania and Allentown Branches,	35,384 13	659 18
	Reading and Columbia Railroad,	44,630 07	3,679 17
Lebanon Valley Branch.	Sinking Spring,	596 19	101 02
	Wernersville,	545 19	18 02
	Robesonia,	6,259 13	
	Womelsdorf,	886 14	117 05
	Sheridan,	22,156 11	25 00
	Richland,	1,303 16	33 11
	Myerstown,	891 19	163 07
	Avon,	40 11	
	Lebanon,	83,391 08	569 03
	Annville,	503 07	177 00
	Palmyra,		
	Derry,	161 06	
	Swatara,	301 10	
	Hummelstown,	222 06	148 11
	Harrisburg,	10,248 08	1,351 11
	Exeter,	48 14	22 06
	Birdsboro',	40.434 17	308 16
	Monocacy,	803 07	21 18
	Douglassville,	637 12	59 04
	Pottstown and Colebrookdale Branch,	23,312 01	308 11
	Limerick,	902 04	115 03
	Royer's Ford,	1,850 06	12 09
	Phœnixville and Pickering Valley Branch.	23,431 13	550 06
	Perkiomen Junction and Perkiomen Branch,	5,409 01	593 06
	Valley Forge,	533 07	
	Port Kennedy,	1,308 02	
	Bridgeport, Chester Valley Branch, and Norristown Branch,	80,863 15	1,049 16
	West Conshohocken,	3,456 16	
	Mill Creek,	478 05	
	West Manayunk,	4,145 08	399 17
Philadelphia.	West Falls,	2,308 03	30 08
	Germantown and Chestnut Hill Branches,	136,414 12	2,407 19
	via Belmont,	102,491 19	5,468 19
	via Columbia Bridge,	88,670 14	1,301 09
	via Richmond Branch,	49,484 04	7,638 01
	Richmond, for shipment,	636,675 11	30,453 04
	Total main line and branches,	1,494,542 08	60,680 03
	Passing over laterals for shipment by Schuylkill Canal,	291,480 12	12,011 05
	Shipped west *via* Catawissa and Williamsport Branch, and N. C. Railway,		
	Consumed on laterals,	33.835 14	24,700 07
	For Company's use,	119,790 04	11,671 01
	Total main line, branches, laterals, &c.,	1,939,648 18	109,062 16
	Bituminous coal,		
	Total of all, (tons of 2,240 pounds,)		

delivered on Main Line, Branches, and Laterals.

ANTHRACITE.						BITUMINOUS.
From Schuylkill Haven.	From Pine Grove.	From Tamaqua.	Lehigh and Wyoming.		Total.	From Harrisburg, &c.
						17 08
		22 16			22 16	790 17
			291,258 15		291,258 15	
		338 18			338 18	
2,072 06	8,279 12				10,397 19	
	99 13				108 11	
	20 17				20 17	
	480 16				515 16	
	24 08				24 08	
21 18	204 08				273 15	15 05
						2,535 09
383 13					627 10	
581 19	337 09				1,077 03	
14 15	4 07	1,012 01			1,040 02	503 09
274 16	92 19	242 11			915 14	54 15
79 10					137 00	
435 09		14 00			934 12	
4,903 16		802 15			9,906 06	49 14
280 03		165 13			584 01	
45,928 07	6,032 06	36,772 10	17 04		166,079 01	19,704 08
4,599 07	165 02	969 10	11 12		8,933 08	
22,359 18	958 03	23,477 15	293 02		83,133 09	16,881 12
56,735 18	28,042 12	10,412 00	11 17		113,512 11	95 17
2,025 16	197 02	227 16			2,118 15	34 02
479 12	291 05	182 05			1,520 03	22 15
2,535 08	219 16	1,619 05			10,664 02	38 01
1,055 04	295 01	161 18			2,516 02	46 18
3,063 02	299 12	3,735 06			29,219 11	52 02
213 03	514 04	8 16			2,073 10	11 19
325 08	3,082 05	121 19			4,584 18	162 09
133 02	1,723 10	28 19			1,826 02	
11,083 13	10,640 17	10,279 06			115,964 07	5,856 09
1,003 06	2,802 11	86 11			4,572 15	77 16
57 02	1,984 00	11 06			2,052 08	39 08
113 12	582 03	20 17			877 18	15 03
68 07	850 16	123 01			1,343 14	34 08
793 09	1,463 09	96 02			2,723 17	55 07
3,395 14	57,504 19	725 04			73,226 16	
48 03		21 05			140 08	
13,937 05	515 02	3,935 03			59,131 03	13,133 10
1,655 13	9 08	460 05			2,950 11	11 19
373 04	7 17	553 10			1,631 07	22 00
16,117 18	1,277 12	3,460 02			41,476 04	24,409 08
665 10		223 13			1,906 10	21 19
1,156 04		358 11			3,377 10	225 09
19,363 03	464 02	3,466 09			47,275 13	19,354 02
2,472 05	23 06	2,083 03	139 09		10,720 10	138 08
398 05		153 06	11 14		1,096 12	
163 05		307 19	11 01		1,790 07	808 12
27,769 00	541 03	30,768 00	1,066 02		142,057 16	35,268 13
1,271 17	7 18	459 16			5,196 07	14 06
1,170 19		18 00			1,667 04	
2,505 12	812 19	496 01	229 06		8,589 03	
6,277 17	6,865 00	495 07		15,976 15		21,201 07
65,044 06	12,193 02	56,719 11	23,352 10	296,102 00		7,020 08
33,674 12	12,911 18	33,480 12	23,336 02	211,364 02		10 05
75,865 14	6,733 06	23,655 00	21,017 11	217,243 14		4,319 07
89,138 00	21,183 17	13,561 16	2,119 08	183,125 06	923,811 17	1,677 15
925,705 02	299,541 16	193,739 10			2,086,115 03	
1,445,702 07	490,285 08	460,105 19	362,875 13		4,317,191 18	174,727 02
281,833 08	17,553 00	77,841 08			680,719 13	
*273,604 03				†13,180 10	286,784 13	
16,884 03	3,902 15	3,303 12			82,626 11	
152,180 10	7,425 00	54,389 14		†18,489 19	363,946 08	3,143 19
2,173,204 11	519,166 03	595,640 13	362,875 13	31,670 09	5,731,269 03	177,871 01
					177,871 01	
					5,909,140 04	

* *Via* Shamokin, 168,415 08; Locust Gap, 105,188 15.

† Shipped west *via* Tamanend.

DISTRIBUTION *of anthracite coal shipped on the Schuylkill canal, during year ending November 30, 1878.*

CONSIGNED TO	From Pt. Clinton.	From Schuylkill Haven.	Total.
	Tons. Cwt.	Tons. Cwt.	Tons. Cwt.
Schuylkill Haven,	. . . . . .	54 10	54 10
Hamburg,	. . . . . .	2,096 00	2,096 00
Shoemakersville,	4 00	684 10	688 10
Mohrsville,	. . . . . .	714 10	714 10
Leesport,	186 00	13,068 00	13,254 00
Duncan's Canal,	. . . . . .	112 00	112 00
Felix's Dam,	. . . . . .	1,748 00	1,748 00
Leize's Dam,	. . . . . .	168 10	168 10
Shepp's Dam,	. . . . . .	52 10	52 10
Kissinger's Dam,	. . . . . .	426 00	426 00
Reading,	580 00	10,128 00	10,708 00
Yost's Landing,	. . . . . .	139 00	139 00
Birdsboro',	16 00	83 00	99 00
Monocacy,	895 00	17,833 00	18,728 00
Unionville,	14 00	118 00	132 00
Pottstown,	. . . . . .	1,021 00	1,021 00
Frick's Locks,	. . . . . .	189 00	189 00
Lawrenceville,	. . . . . .	852 10	852 10
Spring City,	. . . . . .	4,777 00	4,777 00
Royer's Ford,	8 00	8,165 00	8,173 00
Phœnixville,	124 00	1,988 00	2,112 00
Indian Creek,	181 00	. . . .	181 00
Bridgeport,	3 00	. . . .	3 00
Norristown,	. . . . . .	524 00	524 00
Conshohocken,	. . . . . .	5,887 00	5,887 00
Spring Mill,	. . . . . .	351 00	351 00
Manayunk,	904 00	36,206 00	37,110 00
Falls of Schuylkill,	. . . . . .	2,587 00	2,587 00
Philadelphia and points within the capes of the Delaware,	60,279 00	268,259 00	328,538 00
Through Chesapeake and Delaware canal,	1,417 00	24,187 00	25,604 00
Through Delaware and Raritan canal,	32,496 00	190,192 00	222,688 00
Total tons of 2,240 pounds,	97,107 00	592,611 00	689,718 00

DESCRIPTION *of merchandise transported for public use, over the Philadelphia and Reading railroad, and amount of same received in the city of Philadelphia, for year ending November 30, 1878.*

(IN TONS OF 2,000 POUNDS.)

DESCRIPTION.	Total received at Philadelphia.	Total, main road and branches.
Ashes, pot and pearl,	28	1,256
Anthracite coal,	3,371,118	4,835,255
Ale, beer, porter, cider, and malt liquors,	735	9,878
Agricultural implements,	613	2,210
Blooms and puddle-bars,	351	9,673
Bricks, common and fire,	807	15,045
Bituminous coal,	38,337	195,694
Books and stationery—paper, all kinds,	3,519	13,321
Boots and shoes,	3	715
Bran, shipstuff, chop, and middlings,	2,476	18,620
Butter and eggs,	1,853	4,611
Bark,	2,675	12,596
Bones and horns,	1,186	3,318

DESCRIPTION OF MERCHANDISE TRANSPORTED, &C.—*Continued.*

DESCRIPTION.	Total received at Philadelphia.	Total, main road and branches.
Cotton and wool,	2,134	9,603
China, glass and queensware,	668	4,094
Coke and cinders,	630	28,728
Clay and sand,	3,969	23,791
Dry goods and carpeting,	824	11,139
Empty bags, barrels, and boxes,	2,740	6,695
Engines and cars,	814	5,566
Flour,	25,526	42,534
Foreign liquors, brandy, &c.,	. . . .	204
Furniture, all kinds—and pianos,	706	8,076
Fresh fish, meat, and fruit,	7,419	16,639
Groceries, coffee and tea, confectionery, rice,	240	11,401
Grain of all kinds,	59,094	375,671
Guano and poudrette,	603	7,986
Hams and bacon,	1,544	3,355
Hardware and cutlery, anvils, &c.,	801	14,125
Hay and straw,	3,065	5,249
Ice,	49,948	69,771
Iron ore,	1,790	387,742
Iron, (bar, boiler, castings, and steel,)	34,272	129,462
Lime,	37,834	93,661
Limestone, and all other stone,	22,561	230,814
Leather, hides, and skins,	1,204	5,997
Live stock,	2,400	24,137
Marble of all kinds,	3,147	5,825
Machinery, steam engines, and boilers,	3,924	11,411
Molasses and syrups,	. . . .	5,159
Munitions of war,	. . . .	565
Malt,	5,650	17,352
Milk,	15,682	15,682
Marketing and garden truck,	5,954	15,203
Nails and spikes,	4,707	17,246
Oysters,	. . . .	2,649
Oil, all kinds,	499	153,729
Plaster, whole and ground,	953	6,387
Pig iron,	46,658	237,356
Pipes and flues,	7,020	25,410
Potatoes,	9,574	15,816
Paints and dyestuffs,	7,469	20,326
Railroad iron, all sizes,	14,102	73,960
Rags,	1,073	4,739
Ropes, cordage, and rigging,	19	1,279
Scrap iron, cast and wrought,	7,440	21,333
Shingles, shooks, and staves,	2,796	11,442
Stoves and stove-plates of all kinds,	1,235	2,844
Seeds of all kinds,	652	1,391
Sugar,	74	12,746
Salt,	. . . .	8,639
Salt beef, pork, and fish,	1	866
Timber, lumber, cord-wood, sills, and laths,	34,162	192,227
Tobacco and cigars,	1,432	5,557
Tar, pitch, and rosin,	. . . .	1,581
Whisky, alcohol, and burning fluid,	148	2,192
Sundries, of every description not stated,	20,709	259,244
Total in tons of 2,000 pounds,	3,879,567	7,788,788

TABLE *showing the Receipts, Working Expenses, Tonnage, &c., of the Philadelphia and Reading Railroad Company, for the years ending November 30, 1850 to 1878, inclusive.*

YEAR ENDING NOVEMBER 30.	GROSS RECEIPTS.				TOTAL EXPENSES.				TONNAGE.			
	Coal.	Merchandise.	Passengers, mail, and miscellaneous.	Total.	Transportation expenses.	Roadway expenses.	Shipping expenses, rents, taxes, profit and loss, &c.	Total.	Tons coal, (2,240 pounds.)	Tons merchandise, (2,000 pounds.)	Tons company's materials, (2,000 pounds.	Total tons, including weight of passengers, (2,000 pounds.)
1850, ...	$2,071,731	$125,822	$166,405	$2,363,958	$792,024	$154,780	$133,519	$1,080,323	1,351,502	63,625	157,450	1,743,680
1851, ...	2,018,871	123,672	171,787	2,314,330	872.955	160.569	155,413	1,188,937	1,650,270	63,807	219,731	2,145,132
1852, ...	2,150,677	138,964	190,985	2,480,626	874,641	202,132	151,866	1,228,639	1.650,912	75,769	181,217	2,122,171
1853, ...	2,254,694	180,612	252,981	2,688,287	878,071	178,480	165,986	1,222,537	1,582 248	107,853	174.161	2,076,197
1854, ...	3,253,823	231,626	296,190	3,781,639	1,225,321	220,209	195,682	1,641,212	1,987,854	140,801	187,591	2,582,563
1855, ...	3,664,095	325,851	331,848	4,321,794	1,225,239	285,643	216.997	1,727,879	2,213,292	154,384	247,478	2,909,667
1856, ...	3,242,458	348,699	322,584	3,913,741	1,238,970	324,168	261,218	1,824,356	2,088,993	198,886	236.700	2,815,760
1857, ...	2,412,923	329,986	322,612	3,065,521	1,072,099	266,588	143,059	1,481,746	1 709,692	184,617	182,512	2,326,706
1858, ...	1,865,693	335,915	309,143	2,510,751	858,494	223,309	117,996	1,199,799	1,542,646	187,729	170,603	2,125,881
1859, ...	1,883,685	474,888	365,720	2,724,293	899,222	233,578	143,381	1,276,181	1,632,932	334,609	196,104	2,405,314
1860, ...	2,328,158	599,620	381,768	3,312,546	971,511	239,787	242,651	1,453,949	1,946,195	423,523	160,084	2,819,898
1861, ...	2,111,023	406,321	388,494	2,905,838	814,564	246,474	191,096	1,282,134	1,639,535	324,958	143,237	2,348,906
1862, ...	2,879,420	523,416	508,994	3,911,830	977,742	256,935	301,906	1,536,583	2,310,990	451,733	171,499	3,260,953
1863, ...	4,897,200	673,143	682,559	6,252,902	1,588,156	374,212	583,633	2,546,001	3,065,261	652,363	231,071	4,391,877
1864, ...	7,203,775	953,776	1,111,789	9,269,340	2,665,342	722,176	1,197,330	4,584,848	3,065,577	807,106	242,908	4,606,286
1865, ...	8,627,292	1,165,277	1,349,950	11,142,519	3,539,435	997,948	1,368,481	5,905,861	3,090,814	846,105	249,863	4,712,016
1866, ...	8,245,697	1,421,539	1,235,583	10,902,819	3,791,620	1,094,668	1,335,212	6,221,500	3,714,684	1,037,121	226,896	5,574,907
1867, ...	6,404,878	1,525,551	1,176,067	9,106,496	3,600,795	1,066,225	1,100,838	5,767,858	3,446,826	1,185,896	242,526	5,421,538
1868, ...	6,252,224	1,415,723	1,123,990	8,791,937	3,577,625	1,061,079	1,002,396	5,641,100	3,574,874	1,220,596	220,946	5,488,558
1869, ...	8,346,240	1,579,623	1,282,518	11,208,381	3,979,399	1,132,558	1,160,876	6,272,833	4,239,457	1,422,738	337,117	6,667,190
									M. L., Brs., and Lats.			
1870, ...	6,498,871	1,690,444	1,382,052	9,571,367	3,628,472	1,140,703	1,162,292	5,931,467	4,633,504	1,754,943	293,578	7,449,925
1871, ...	8,287,293	2,306,643	1,968,907	12,562,843	4,108,044	1,261,952	1,489.971	6,859,967	6,002,573	2.305,234	437,456	8,548,964
1872, ...	7,513,115	2,688,030	1,923,893	12,125,038	4,472,343	1,397,143	1,432,252	7,301.738	6,185,434	2,891,410	497,571	10,981,657
1873, ...	9,104,094	3,603,177	2,125,390	14.832,661	5,426,479	1,674,591	1,558,850	8,659,920	6,546,553	3,331,194	651,618	11,932,262
1874, ...	8,920,914	3,380,301	2,150,906	14,452,121	5,157,240	1,252,293	1,530,701	7,940,234	6.348,812	3,098,831	493,591	11,335,261
1875, ...	7,636,699	3,026,008	1,998,220	12.660,927	4,867,129	1,192,496	1,450,615	7,510,240	5,505,455	2,720,208	581,984	10,099,040
1876, ...	6,708,682	2,949,501	2,569,328	12,227,511	4,990,572	1,139,186	1,650,001	7.779,759	5,595,207	2,493,277	482,222	10,236,326
1877, ...	7,505,207	2,913,588	1,724,115	12,142,910	4,656,167	873,689	1,824,393	7,351,254	7,255,318	2,837,618	313,981	11,833,826
1878, ...	7,206,952	2,690,766	1,641,875	11,539,593	4,301,106	930,666	1,747,470	6,979,242	5,909,140	2,757,839	412,110	10,383,317

Items of Receipts, Expenses, &c.—Continued.

Year ending November 30.	PASSENGERS		COST OF TRANSPORTATION.			LOCOMOTIVE ENGINES.				COAL AND FREIGHT CARS.		PASSENGER CARS.		Expenses at Philadelphia.	Railroad bars used in repairs—tons.	Wood used—cords.	Coal used—tons.	Oil used—gallons.	NUMBER OF MILES	
	Total number.	Equal to through.	Coal, per ton.	Merchandise, per ton.	Passenger, through, each.	Total number.	Miles run.	Average of coal trains—tons.	Cost of repairs.	Total number.	Cost of repairs.	Total number.	Cost of repairs.						Main track open.	Double track.
1850,	92,726	46,041	$0 41.01	$0 67.30	$0 73.70	92	1,233,144	372	76,245	5,117	$163,780	28	$7,880	$10,313	670.7	53,997	4,335	42,815	95	95
1851,	127,590	57,593	38.54	69.20	69.90	89	1,461,772	368	97,750	5,136	153,771	28	8,415	17,587	1,015.1	61,222	9,663	44,062	95	95
1852,	155,164	69,579	35.36	77.50	86.80	103	1,517,931	366	99,027	5,241	160,436	39	11,638	17,198	1,319.8	52,990	15,963	37,083	98	98
1853,	211,849	92,657	35.07	76.90	62.90	103	1,466,894	381	119,646	5,476	155,531	38	8,085	21,191	1,571.5	38,376	21,971	33,456	98	98
1854,	266,631	105,219	41.06	81.70	74.20	121	1,674,403	409	214,134	5,703	212,892	45	11,726	25,684	2,272.7	31,844	40,178	45,330	98	98
1855,	277,617	111,822	33.61	80.10	81.49	141	1,948,225	423	201,205	5,724	205,923	51	11,389	35,734	4,985.9	28,140	52,115	52,315	98	98
1856,	282,300	106,205	35.21	67.85	1 00.42	141	1,942,317	412	233,572	5,719	217,959	58	18,901	39,686	5,933.7	23,274	51,020	43,960	98	98
1857,	291,679	107,039	36.30	68.51	70.10	142	1,707,366	441	197,833	5,755	171,550	58	13,629	31,401	1,791.2	20,334	47,891	39,066	98	98
1858,	285,651	104,519	27.74	62.80	73.90	142	1,570,482	422	151,493	5,641	120,260	58	12,025	25,066	4,316.0	14,721	39,284	33,782	152	98
1859.	379,406	126,076	23.02	47.60	96.50	144	1,702,257	436	153,347	5,695	122,283	61	16,189	11,473	3,332.0	15,648	41,334	33,800	152	98
1860,	385,304	129,978	21.74	38.61	87.44	145	1,852,485	413	158,376	5,596	147,417	64	16,850	11,081	4,231.0	10,560	51,703	41,023	152	98
1861,	368,651	140,451	20.82	45.77	83.52	115	1,695,9[illegible]7	436	131,098	6,673	122,513	65	16,976	5,798	3,499.9	7,738	38,964	32,998	152	98
1862,	396,466	150,970	17.50	36.14	67.10	143	2,088,166	457	132,406	7,300	169,193	67	19,018	13,928	2,706.8	6,338	44,751	43,598	152	98
1863,	576,861	211,970	21.98	38.41	60.32	166	2,721,689	514	209,949	8,430	317,424	67	25,793	20,413	3,710.0	6,431	81,886	55,679	152	107
1864,	1,048,521	342,252	30.16	45.50	68.60	246	3,328,229	457	419,466	9,606	512,759	81	39,868	46,224	6,220.7	8,697	106,280	70,959	152	126
1865,	1,481,632	393,350	40.45	53.64	80.49	254	3,688,309	462	616,736	9,663	693,716	87	71,839	34,250	5,279.9	10,225	120,163	86,542	154	130
1866,	1,444,257	384,302	36.25	44.10	96.50	267	4,261,346	471	690,277	10,517	671,715	105	56,551	17,129	8,596.3	9,299	116,689	115,143	152	133
1867,	1,273,644	345,970	36.66	40.73	1 11.40	268	4,356,385	458	588,980	10,477	679,098	110	66,144	12,121	8,558.3	7,082	111,713	117,071	152	133
1868,	1,194,575	330,835	34.57	39.13	1 04.85	269	4,500,135	449	579,100	10,531	591,752	119	61,702	2,933	11,396.5	7,486	117,113	122,813	152	133
1869,	1,527,769	435,754	34.26	37.62	87.60	297	5,151,301	467	507,813	11,895	741,867	141	68,173	2,829	12,065.1	7,719	162,537	161,718	152	139
1870,	2,034,039	446,328	32.00	28.65	74.78	309	5,100,175	474	439,536	15,728	628,171	148	60,590	2,145	11,252.1	7,495	145,723	138,793	152	139
1871,	5,766,934	719,845	27.05	21.40	66.72	313	6,543,138	512	416,249	16,320	756,613	238	91,795	5,390	15,385.9	9,031	181,687	148,323	260	151
1872,	6,383,991	791,478	27.10	21.05	66.53	377	7,248,778	521	460,225	18,368	823,578	265	96,783	20,537	16,452.1	7,960	222,515	170,306	323	151
1873,	6,790,088	860,829	26.70	26.48	76.41	400	8,351,682	512	493,520	19,221	913,839	281	109,228	17,581	18,375.7	9,409	268,791	187,135	327	151
1874,	6,964,869	852,312	24.60	27.65	89.12	405	8,119,077	523	456,246	19,110	824,528	279	121,017	19,000	9,915.3	7,789	250,851	189,563	327	155
					Per pass'r.															
1875,	6,938,129	823,182	25.40	28.13	9.87	410	7,690,534	553	416,177	19,047	722,737	310	137,319	16,665	9,932.9	6,726	213,122	196,603	327	155
1876,	10,936,157	1,131,649	21.20	31.59	7.76	414	8,414,596	561	432,411	19,000	828,091	395	186,667	22,612	10,321.4	5,250	260,399	221,163	327	155
1877,	6,674,889	799,088	20.30	28.11	8.39	415	8,871,290	556	336,577	19,022	707,827	393	101,190	6,317	8,763.6	6,533	325,370	239,813	327	155
1878,	6,376,413	807,642	17.90	29.01	8.67	416	8,247,785	587	829,904	18,998	616,689	383	97,630	3,256	10,312.5	3,874	291,208	222,815	327	155

EXTENT *of Railroads in charge of Roadway Department, November 30, 1878.*

NAME OF ROAD.	Single track.	Double track.	Length of road.	Sidings and laterals.	Total.
Main line, Philadelphia and Reading railroad,	. . . .	98.4	98.4	161.5	358.3
Northern Liberties and Penn Twp. Branch,	. . . .	1.4	1.4	.9	3.7
Port Kennedy Branch,	1.2	. . .	1.2	.4	1.6
Lebanon Valley Branch,	9.2	44.5	53.7	22.1	120.3
Lebanon and Tremont Branch,	42.2	. . .	42.2	25.6	67.8
Schuylkill and Susquehanna Branch,	53.4	. . .	53.4	8.9	62.3
Mount Carbon Branch,	8.5	. . .	8.5	9.8	18.3
Mahanoy and Shamokin Branch,	53.8	10.8	64.6	72.4	147.8
Moselem Branch,	1.7	. . .	1 7	.7	2.4
West Reading Branch,	1.9	. . .	1.9	.9	2.8
Total roads owned,	171.9	155.1	327.0	303.2	785.3
Chester Valley railroad,	21.5	. . .	21.5	2.3	23.8
Perkiomen railroad,	38.6	. . .	38.6	6.7	45.3
Colebrookdale railroad,	12.8	. . .	12.8	2.1	14.9
Pickering Valley railroad,	11.3	. .	11.3	.6	11.9
East Pennsylvania railroad,	17.7	18.3	36.0	16.6	70.9
Allentown railroad,	4.5	. . .	4.5	.3	4.8
Little Schuylkill railroad,	28.1	. . .	28.1	23.7	51.8
Mine Hill railroad,	31.9	21.8	53.7	59.9	135.4
Mount Carbon and Port Carbon railroad,	. . . .	2.5	2.5	13.4	18.4
Mill Creek railroad,	. . . .	3.8	3.8	16.2	23.8
Schuylkill Valley railroad,	5.7	5.3	11.0	13.5	29.8
East Mahanoy railroad,	10.7	. . .	10.7	3.8	14.5
Phila., Germantown and Norristown railroad,	13.5	20.2	33.7	20.1	74.0
Catawissa railroad,	92.6	. .	92.6	20.0	112.6
Philadelphia and Chester Branch,	4.1	9.9	14.0	3.4	27.3
Berks and Lehigh Branch,	41.2	. . .	41.2	3.0	44.2
Total roads leased,	334.2	81.8	416.0	205.6	703.4
Reading and Columbia railroad,	39.5	. . .	39.5	16.4	55.9
Lebanon Branch, R. and C. railroad,	1.6	. . .	1.6		1.6
Quarryville Branch, R. and C. railroad,	15.3	. . .	15.3	1.3	16.6
Total roads controlled,	56.4	. . .	56.4	17.7	74.1
RECAPITULATION:					
Roads owned,	171.9	155.1	327.0	303.2	785.3
Roads leased,	334.2	81.8	416.0	205 6	703.4
Roads controlled,	56.4	. . .	56.4	17.7	74.1
Total,	562.5	236.9	799.4	526.5	1,562.8

ITEMS OF COST, *in detail, of hauling coal on the Philadelphia and Reading railroad, for the year ending November 30, 1878.*

(Per round trip of 190 miles, from coal region to tidewater, and back with empty cars; transporting average loads of 738.3 tons, and average through loads of 587.3 tons of coal of 2,240 pounds each.)

ITEMS OF COST.	Number.	Description.	Average rate.	Amount.
Wages of engineer,	2	Days.	$2 98	$5 96
Wages of fireman,	2	Days.	1 98	3 96
Wages of conductor,	2	Days.	1 99	3 98
Wages of brakemen and signalmen,	6	Days.	1 82	10 92
Anthracite coal for fuel,	11.8	Tons.	2 08	24 54
Oil and tallow for engine and tender, including lamps,	. . .	Trip.	. . . . .	1 78
Oil and grease for company's cars,	. .	Trip.	. . . .	3 00
Repairs of engine and tender,	190	Miles.	5.9	11 22
Repairs of company's coal cars,	. . .	Trip.	. . . . .	57 23
Supplying water,	17	M. galls.	6	1 02
Wood for kindling, &c.,	.15	Cords.	3.95	59
Assistant engines, at Fall's grade,	587.3	Tons.	.5	2 94
Car-couplers, time-keepers, dispatchers, and all other contingent expenses,	587.3	Tons.	.81	4 76
				$131 90

Equal to 17.9 cents per ton, or 22.5 cents per ton carried through 95 miles.

ITEMS OF COST, *in detail, of running passenger trains on the Philadelphia and Reading railroad, for the year ending November 30, 1878.*

(PER DAILY TRIP OF 93 MILES.)

ITEMS OF COST.	Number.	Description.	Average rate.	Amount.
Wages of engineer,	1	Day.	. . . .	$3 05
Wages of fireman,	1	Day.	. . . . .	1 89
Wages of conductor,	1	Day.	. . . .	2 66
Wages of baggage-master,	1	Day.	. . . . .	1 77
Wages of brakemen,	2	Day.	$1 73	3 46
Coal for fuel,	2.4	Tons.	2 08	4 99
Wood for kindling,	.1	Cords.	3 95	40
Water used,	4	M. galls.	6	24
Oil and tallow for engine and tender, including lamps,	. . .	Trip.	. . . . .	56
Oil and grease for cars,	. . .	Trip.	. . . . .	13
Repairs of engines,	93	Miles.	3.6	3 37
Repairs of and re-fitting cars,	. . .	Trip.	. . . . .	5 68
Hands at depots, extra engines, &c.,	. . .	Trip.	. . . . .	1 83
Sundries for trains, gas, and all other charges,	. .	Trip.	. . . . .	2 15
				$32 18

Equal to 8.67 cents per passenger, at 371 passengers per train.

ITEMS OF COST, *in detail, of running freight trains on the Philadelphia and Reading railroad, for the month ending November 30, 1878.*

(PER DAILY TRIP OF 93 MILES.)

Transporting average loads of 151.1 tons, and average through loads of 77.6 tons of merchandise, of 2,000 pounds each.

ITEMS OF COST.	Number.	Description.	Average rate.	Amount.
Wages of engineer,	1	Day.	. . . . .	$3 19
Wages of fireman,	1	Day.	. . . .	1 97
Wages of conducter,	1	Day.	. . . .	2 02
Wages of brakemen and signalmen,	3	Day.	$1 91	5 73
Coal for fuel,	4	Tons.	2 08	8 32
Wood for kindling, &c.,	.1	Cords,	3 95	40
Oil and tallow for engine and tender,	. . .	Trip.	. . . . .	82
Oil and grease for company's cars,	. . .	Trip.	. . . . .	17
Water used,	7	M. galls.	6	42
Repairs of engine and tender,	93	Miles.	3.4	3 20
Repairs of company's cars,	. . .	Trip.	. . . . .	11 84
Depot hands, and other depot expenses,	. . .	Trip.	. . . . .	3 47
Renewals of sundry articles, goods damaged, &c.,	. . .	Trip.	. . . . .	2 29
				$43 84

Equal to 29.01 cents per ton, or 56.49 cents per ton carried through, 93 miles.

COAL WASTES.

A coal machine for pressing into round or oval balls, the dust of coal, invented and patented by Doctor J. R. Hayes, Harrisburg, Pa., deserves the attention of those engaged in mining coal. The following is a description of the machine:

The moulder consists of two cylinders perforated with as many holes as the capacity and size of ball will allow. These apertures in two cylinders are reamed out, of the same depth and width, so that when two rollers running in the opposite directions come together, the two half apertures inclose a perfect oval. Candy makers and cracker makers, have a similar set of cylinders for making candy balls, &c. The two rollers are set to run close together, and surmounted by a hopper containing the prepared dust as it falls from a mixer. As it falls into a hopper, the cavities in each cylinder become filled, and at the point of contact between the two cylinders, the ball firmly pressed, is formed, and drops down on an endless belt, and is thence carried off a suitable distance.

The mixer is an ordinary rotary mixer, eighteen feet long, fed at its further end, by buckets from the coal dust heap. On one side of the mixer are stationed two tanks, one containing melted pitch, and the other filled with a solution of lime and clay, both automatically feeding into the mixer. The gearing is the same as in any machine. The cost of the whole machine and apparatus connected with it, independent of motive power, and having a capacity of moulding a ton of coal in five minutes, is about $2,500. The cost of production, seventy cents per ton, including labor.

The cementing elements used by the doctor, are solid pitch, lime, and clay in small proportions, which he combines with the dust or "waste," to the extent of five per cent., and the mixture passing through moulds in the forming machine, comes out in the shape of hard oval balls ready for use. Balls made either from bituminous, semi-bituminous, or anthracite, burn as long, and give as much calorie as pure coal.

The Doctor's theory is, that when pitch and lime are blended under heat, an asphaltic cement is formed, the strongest that can be devised for permanently binding together the small particles of carbon. This renders the ball or lump completely impervious to moisture, a condition natural coal does not possess. The use of clay in the composition is for its well known property of contraction under heat, which keeps the lumps hard under combustion. The whole process is so complete, and the machinery to mould the mixture so simple and economical, that in view of the vast waste in the production of our coal, the matter should engage the attention of economists, coal consumers, and coal operators throughout the country, and particularly in Pennsylvania.

One of these machines was in successful operation at Harrisburg, in the summer of 1875, and many tons of coal were made by this process, but soon after the coal interests became so depressed, that it was not deemed advisable to further prosecute the invention. As we recover from our depression, the necessity for such a machine is apparent.

FOUNDRIES AND MACHINE SHOPS.

BEAVER COUNTY.

Merrick & Co., (E. D. Merrick, F. A. Merrick.)

New Brighton, Beaver county.
Establishment located in New Brighton, Beaver county.
Whole number of persons employed, 7.
Amount of capital employed in business, $25,000.
Amount paid annually for wages of employés, $1,550.
Amount paid for materials used in business, $2,900.
Value in dollars of annual product, $6,100.

Classification.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	4	. . .	. . .	$2 25	. . . .	. . . .	9	130
Cupola man,	1	. .	. . .	1 25	. . . .	. . . .	9	130
Fitter,	1	. . .	. .	1 25	. . . .	. . . .	9	130
Japanner,	1	. . .	. . .	1 25	. . . .	. . . .	9	130

Remarks.—We manufacture, as a general business, grate fronts, grates, fenders, and summer pieces, making a specialty of Merrick's patent anti-dust grate, both for fire-places and stoves. Our anticipations of a revival of trade during the past year were not realized, showing a falling off of about one third from the year 1877. With the resumption of specie payments, and a restoration of confidence, we confidently look forward to a revival of former prosperity in all branches of industry.

MERRICK & CO.

Olive Stove Works.

Rochester, Beaver county.
Establishment located in Rochester, Beaver county.
Whole number of persons employed, 22.
Amount of capital employed in business, $8,000.
Amount paid annually for wages of employés, $9,408 63.
Amount paid for materials used in business, $10,031 79.
Value in dollars of annual product, $25,758 58.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	9	. . .	. . .	$2 75	. . . .	. . . .	10	9 mos
Foreman,	1	. . .	. . .	2 50	. . . .	. . . .	10	1 year
Engineer,	1	. . .	. . .	1 50	. . . .	. . . .	10	1 year
Pattern-maker and carpenter	1	. . .	. . .	1 75	. . . .	. . . .	10	1 year
Laborers,	5	. . .	. .	1 00	. . . .	. . . .	10	1 year
Fitters,	1	. . .	1	3 00	. . . .	$1 50	10	
Book-keeper,	1	. . .	. . .	1 50				
Superintendent,	1	. . .	. . .	2 50				
Salesman,	1	. . .	. .	2 50				
Watchman,	1	. . .	. . .	1 25				

OLIVE STOVE WORKS.

A. F. Wolf.

Beaver Falls, Beaver county.

Establishment located in Beaver Falls, Beaver county.

Whole number of persons employed, 60.

Amount of capital employed in business, $80,000.

Amount paid annually for wages of employés, $23,000.

Value in dollars of annual product, $65,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	30	5	5	*$2 50	. . . .	. . . .	10	300
Machinist, (best,)	1							
Stove moulders,	7							
Laborers,	8							
Foreman,	1							
Engineer,	1							
Pattern-makers and carpenters,	2							

* Average.

CHARACTERISTICS OF ESTABLISHMENT.—Manufacture stoves and hollow ware.

A. F. WOLF.

Western File Company, (Limited.)

Beaver Falls, Beaver county.
Establishment located in Beaver county.
Whole number of persons employed, 200.
Amount of capital employed in business, $300,000.
Amount paid annually for wages of employés, $77,000.
Amount paid for materials used in business, $55,000.
Value in dollars of annual product, $200,000.

WESTERN FILE COMPANY, (LIMITED.)
JAS. M. FESSENDEN, *Clerk.*

M. & S. H. Darragh, and M. Darragh & Co.

Rochester and New Brighton, Beaver county.
Establishment located in Beaver, Beaver county.
Whole number of persons employed, 10.
Amount of capital employed in business, $25,000.
Amount paid annually for wages of employés, $4,000.
Amount paid for materials used in business, $10,000.
Value in dollars of annual product, $50,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	2	. . .	. .	$2 00	. . .	. . . .	10	Ten months
Machinist, (best,)	1	. . .	. .	2 50	. . . .	. .	10	
Foremen,	2	. . .	. . .	3 00	. . . .	. . . .	10	
Engineer,	1	. . .	. . .	1 25				
Laborers, carters,	2	. . .	. . .	1 50	. . . .	. . . .	10	
Apprentices, (machinists,)	2	. . .	. . .	. . . .	. . .	$0 75		

REMARKS.—Our foundry is located at Bridgewater. Our machine shop at Falston, in adjoining borough. We run foundry exclusively by steam, and machine shop by water principally, but can use steam in high and low water.

M. & S. H. DARRAGH,
M. DARRAGH & CO.

BEDFORD COUNTY.

Fred Felton & Son.

Everett, Bedford county.

Establishment located in Bedford county.

Whole number of persons employed, 2.

Amount of capital employed in business, $1,500.

Amount paid annually for wages of employés, $825.

Amount paid for materials used in business, $925.

Value in dollars of annual product, $3,250.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder, ...	1	. . .	. . .	$1 50	. . . .	. . . .	10	260
Flangers, helpers, ...	1	. . .	. . .	1 00	. . . .	. . . .	10	36
Pattern maker and carpenter,	1	. . .	. . .	1 59	. . . .	. . . .	10	260

F. FELTON & SON.

Shires & Jordan.

Bedford, Bedford county.

Establishment located in Bedford county.

Whole number of persons employed, 4, besides ourselves.

Amount of capital employed in business, $12,000.

Amount paid annually for wages of employés: This last year, $1,100.

Amount paid for materials used in business: We trade for a great deal of material we don't keep account of, therefore we cannot give the amount.

Value in dollars of annual product, $6,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders, ...	2	. . .	. . {	$1 50 1 00	} . . .	. . . .	8	8 mos.
Machinists, in wood, ...	1	. . .	. . .	1 25	. . . .	. . . .	8	
Blacksmiths, ...	1	. . .	. . .	1 25	. . . .	. . . .	8	

REMARKS.—Business has been very dull the last year, and prices of goods reduced very low. There is not much doing now.

SHIRES & JORDAN.

BLAIR COUNTY.

Andrew Riley & Henry Lautzer.

Williamsburg, Blair county.

Establishment located in Williamsburg, Blair county.

Whole number of persons employed, 3.

Amount of capital employed in business, $2,000.

Amount paid annually for wages of employés, $326.

Amount paid for materials used in business: All traded for, and can give no estimate.

Iron moulders—number of men, 2; daily wages paid, $1; hours worked per day, 8. Blacksmiths—number of men, 1.

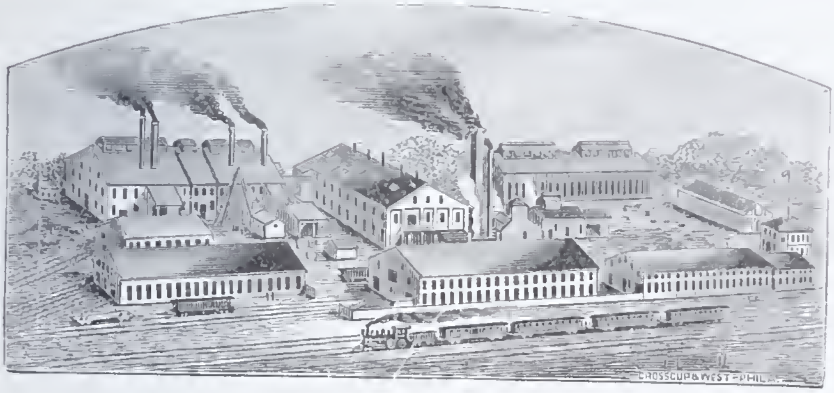
REMARKS.—The firm has been doing no business at all for the last year, except making a few small lots of plows and shares. They will dissolve April 1, 1879, and, as far as known, the business will be discontinued.

The foundry building is of frame, 110 feet in length, and contains one carpenter room, one blacksmith shop, one moulder's room, one cupola room, and one power room, and is run by horse power. Located on the corner of Second and Water streets.

A. RILEY & LAUTZER.

DAUPHIN COUNTY.

Harrisburg Car Manufacturing Company.


CROSSCUP & WEST - PHILA.

Harrisburg, Dauphin county.

Among the interests largely developed in our State coincident with the growth of the great railroad system of our country, is that of railroad car building, a business for which our abundant cheap coal and iron, give to the people of our Commonwealth superior advantages, which have been made largely available both for supplying the wants of the lines in our own State, as well as for large portions of territory outside of our own domain.

Within a short distance from the capital buildings of the State, is situated one of the oldest and largest establishments for that purpose. The

Harrisburg Car Manufactory was originated and built in the summer of 1853, a joint enterprise of Messrs. William Calder, David Fleming, Jacob Haldeman, Elias E. Kinzer, Thomas H. Willson, A. O. Heister, William F. Murray, Isaac G. McKinley, all of the city of Harrisburg, Pa., and William T. Hildrup, a practical car builder from Worcester, Mass.

The operation was started with a paid up capital stock of $25,000, and a productive capacity of nine eight-wheeled cars per week, which at that day was considered to be an enterprise of considerable magnitude. Cars, as then built, were made lighter in material and proportions, with about two thirds the carrying capacity of those at this date. From that, what now would be considered a small beginning, has grown up, year by year, owing to the increase of railroads, and perfection of their machinery and equipment, one of the largest and most important industries of the State. The enterprise and energy of the gentlemen comprising this company had made this establishment one of the prominent and growing manufactories, so that by the year 1871 its manufacturing capacity was greater in daily product than the weekly one named at the beginning, viz: nine cars. Its capital stock had increased to $300,000, and its annual product $1,250,000. In April, 1872, the works were entirely consumed by fire, entailing a loss of several hundred thousand dollars, yet such was the energy of the parties that in the short space of ninety days the works were re-built, with an increased size and capacity; and, notwithstanding the loss of means and time by the fire, the production for the year was carried to the enormous sum of $2,000,000.

This may be given as an individual specimen of those now engaged in the business, which is represented by many others in the State, among whom are W. C. Allison & Co., Philadelphia; Billmyer & Small Company, York; Michael Schall, York; Jackson & Wooden Manufacturing Company, Berwick; Dickson Manufacturing Company, Scranton; Erie Car Works, Erie; Frederick & Co., Catasauqua; Lebanon Manufacturing Company, Lebanon; Pittsburgh Car Works, Pittsburgh; with several other lesser establishments, the total number being some twenty-two concerns engaged in the business.

Establishment located in Harrisburg, Dauphin county.

Value in dollars of annual product: November 1, 1877, to November 1, 1878, $523,164 03.

Whole number of persons employed: Varying from 10 to 400.

Amount of capital employed in business, $350,000.

Amount paid annually for wages of employés, about $60,000 for our fiscal year ending November 1, 1878.

Amount paid for materials used in business: Material, labor, expenses, taxes, &c., amount to nearly the total sum of manufactures.

The remaining questions could only be answered approximately if the time books were counted up and classified for the year. This would involve a large amount of labor. I give you, as follows, for an approximate of one week's pay-roll:

Foundry, $610 73; carpenters, $1,335 66; painters, $146 99; outside laborers and teamsters, $118 92; blacksmiths, $614 63; machinists, $393 28; watchmen, $30 10; total, $3,250 41.

On another kind of cars the divisions would vary, but the above is probably sufficient for your purpose.

The principal business is the manufacture of railroad cars, which embraces the several trades of founders, blacksmiths, machinists, both in iron and wood, carpenters and painters, with attendant laborers.

W. T. HILDRUP, *Superintendent.*

COLUMBIA COUNTY.

I. & R. Hower, (Not Incorporated.)

Berwick, Columbia county.
Establishment located in Berwick, Columbia county.
Whole number of persons employed, 6.
Amount of capital employed in business, $14,000.
Amount paid annually for wages of employés, $18,000.
Amount paid for materials used in business, $15,000.
Value in dollars of annual product, $3,800.

Classification.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	1	1	...	$1 75	$0 50	....	10	230
Machinist, (best,)	1	...	...	1 50	....	....	10	
Blacksmith,	1	...	..	1 25	....	....	10	
Foreman,	1	...	...	1 50	....	....	10	
Laborer, carter,	1	...	...	1 25	....	....	10	

Harman & Hassert.

Bloomsburg, Columbia county.
Establishment located in Bloomsburg, Columbia county.
Whole number of persons employed, 5.
Amount of capital employed in business, $5,000.
Amount paid annually for wages of employés, $2,000.
Amount paid for materials used in business, $2,000.
Value in dollars of annual product, $4,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	2	. . .	. . .	$1 50	. . . .	. . . .	10	280
Machinist, (best,)	1	. . .	. . .	1 50				
Blacksmith,	1	. . .	. .	1 50				
Laborer, carter,	1	. . .	. . .	1 00				

HARMAN & HASSERT.

CARBON COUNTY.

Miner Brothers.

Weissport, Carbon county.

Establishment located at Weissport, Carbon county.

Whole number of persons employed, (including ourselves,) 21.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $6,831 50.

Amount paid for materials used in business, $7,500.

Value in dollars of annual product, $16,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	8	3	3	$2 00	$0 50	$0 75	9	284
Carpenter,	1	. . .	. .	1 50	. . . .	. . . .	. . .	140
Laborers,	3	. . .	. . .	1 25	. . . .	. . . .	. . .	270

MINER BROTHERS.

CAMBRIA COUNTY.

Cambria Iron Company.

Johnstown, Cambria county.

Establishment located in Cambria county.

Whole number of persons employed, 504.

Amount of capital employed in business: Included in total capital of Cambria Iron Company.

Amount paid annually for wages of employés, $189,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Machine shop,	160	10	. .	$0 80 to 3 00	$0 40 to 70	. . .	10	12 months.
Smith shop,	45	5	. .	1 00 to 2 00	57 to 78	. . .	10	
Carpenter and car shop,	45	5	. .	1 00 to 2 61	52 to 75	. . .	10	
Wagon shop,	12	.	. .	75 to 1 37	. . .	. . .	10	
Saddler shop,	3	. . .	. .	1 25 to 1 75	. . .	. . .	10	
Paint shop,	10	. . .	. .	1 10 to 2 18	. . .	. . .	10	
Boiler shop,	18	. .	. .	78 to 2 48	. . .	. . .	10	
Pattern shop,	18	3	. .	1 00 to 1 91	52 to 60	. . .	10	
Foundry,	85	5	. .	78 to 2 09	40 to 70	. . .	10	
Brick and stone masons,	60	. . .	. .	1 00 to 2 00	. . .	. . .	10	
Helpers,	20	. . .	. .	78 to 83	. . .	. . .	10	

Hands employed in the above departments, are engaged in the construction and repairs of works.

CAMBRIA IRON COMPANY,
POWELL STACKHOUSE,
Assistant General Manager.

GREENE COUNTY.

C. W. Bower's Sons.

(C. E. Bower and O. P. Bower, deceased, July 5, 1878.)
Waynesburg, Greene county.
Establishment located in Waynesburg, Greene county.
Whole number of persons employed, only 4, as marked below.

Amount of capital employed in business, about $2,000.

Amount paid annually for wages of employés: Found below.

Amount paid for materials used in business: About 40 tons miscellaneous old metal, worth $5,000.

Value in dollars of annual product, about $1,200.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder,	1	. . .	. . .	$1 50	. . . .	. . .	10	120
Machinist,	1	. . .	. . .	1 50	. . . .	. . . .	10	120
Foreman,*	1							
Engineer,*	1							
Pattern-maker and carpenter	1							
Assistant,*	1							
Laborer—carter,	1	. . .	. . .	1 00	. . . .	. . . .	10	25

* Proprietor.

REMARKS.—This establishment has made from 1868 to 1875, about five thousand dollars worth of plows, plow castings, and other miscellaneous castings per year; since then, its business has declined to its level of about $1,200 per year, barely paying expenses and supporting two families comfortably, leaving no profits whatever.

C. W. BOWERS,
For C. W. BOWER'S SONS.

CHESTER COUNTY.

E. T. Cope & Sons.

West Chester, Chester county.

Establishment located in Chester county.

Whole number of persons employed, 20.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $10,000.

Amount paid for materials used in business, $10,000.

Value in dollars of annual product, $25,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	3	. . .	. . .	$1 75	. . .	. . .	10	300
Machinists, (best,)	4	. . .	3	2 00	. . .	$1 00	10	300
Machinist, (ordinary,)	1	. . .	. . .	1 50	. . .	. . .	10	300
Machinists, (helpers,)	2	. . .	. . .	1 25	. . .	. . .	10	300
Boiler-maker,	1	. . .	. . .	2 00	. . .	. . .	10	300
Blacksmith,	1	. . .	. . .	2 00	. . .	. . .	10	250
Pattern-makers & carpenters,	3	. . .	. . .	1 75	. . .	. . .	10	300
Laborers—carter,	1	. . .	. . .	1 00	. . .	. . .	10	250
Millwright,	1	. . .	. . .	2 00	. . .	. . .	10	150

REMARKS.—This establishment is a water power manufactory. The foundry and machine shop are among the oldest in the United States. At present engaged in the manufacture of paper machinery, flour machinery, steam engines, and turbine water wheels.

E. T. COPE & SONS.

John White.

Cupola, Chester county.

Establishment located in Honeybrook township, Chester county.

Whole number of persons employed, 2.

Amount of capital employed in business, $500.

Amount paid annually for wages of employés, $475.

Amount paid for materials used in business, $225.

Value in dollars of annual product, $750.

Iron moulders, 2; machinist, (ordinary,) 1. Daily wages paid men, $1 50. Hours worked per day, 10. Days in operation during year: Foundry, 90; machine shop, 140.

REMARKS.—Our work is on plows and plow castings and repairing of agricultural machinery. This statement includes from April 1, 1878.

JOHN WHITE.

FRANKLIN COUNTY.

Frick & Co.

Partners as follows: A. O Frick, S. B. Rinehart, William H. Snyder, J. Phillips, Samuel Hœflich, Daniel Pritle, Joseph Price, D. Hollinger, L. W. Wingert, Doctor A. H. Strickler.

Waynesboro', Franklin county.

Establishment located in Waynesboro', Franklin county.

Whole number of persons employed, average 110.

Amount of capital employed in business, about $150,000.

Amount paid annually for wages of employés, about $41,000.

Amount paid for materials used in business, about $52,800.

Value in dollars of annual product, ross amount about $185,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	4	4	4	$1 60	$0 50	$0 80	10	Full year for all.
Machinists, (best,)	10	2	12	2 00	50	80	10	
Machinists, (ordinary,)	15	...	...	1 75	...	...	10	
Machinists, (inferior,)	6	...	...	1 30	...	...	10	
Machinists, (helpers,)	6	...	...	1 10	...	...	10	
Boiler-makers,	4	4	3	1 75	50	80	10	
Boiler-makers, (helpers,)	6	...	...	1 10	...	...	10	
Riveters,	6	...	...	1 70	...	...	10	
Holders-on,	3	...	...	1 20	...	...	10	
Flangers,	2	...	...	2 00	...	...	10	
Flangers, (helpers,)	3	...	...	1 10	...	...	10	
Blacksmiths,	5	...	...	1 70	...	...	10	
Blacksmiths, (helpers,)	4	...	...	1 10	...	...	10	
Foreman,	1	...	...	2 20	...	...	10	
Engineer,	1	...	...	1 50	...	...	10	
Pattern-makers & carpenters,	4	...	...	1 60	...	...	10	
Laborers, carters,	2	...	...	1 25	...	...	10	

REMARKS.—This statement is made for the full year; for December we have taken the business of November as a basis, which we feel safe in doing. The amounts under wages and material may vary a few hundred dollars either way, as December is approximated. The number of men employed is given on an average, taking in those employed in the office. The amounts under cost of material does not include the entire expenses of the business, which we could not get at, and are not given. Our principal business is building the "Eclipse" portable engine, as used for farm and plantation purposes, for running saw-mills, &c. We, also, build portable circular saw-mills, stationary engines, and boilers, and do boiler work generally. We build traction or road engines, for general hauling on roads, farms, &c.

FRICK & CO.

LEBANON COUNTY.

E. & J. Light.

Lebanon, Lebanon county.

Establishment located in Lebanon borough, Lebanon county.

Whole number of persons employed, 10.

Amount of capital employed in business, $6,023 78.

Amount paid annually for wages of employés, $3,000.

Amount paid for materials used in business, $3,023 78.

Value in dollars of annual product, $11,000.

Iron moulders, 8; apprentices, 2; daily wages paid men, 90 cents, $1 20, $1 25, and $2 10; daily wages paid apprentices, 50 cents; hours worked per day, 10; days in operation during year, 200.

REMARKS.—Our foreman gets paid all the year round, and so also the clerk. Pattern-maker had little to do through the year; he is not counted with the men employed. Boys, we have now and then one. The foundry is a brick building, some 80 by 50 feet, on corner of Eighth and Guilford streets.

E. & J. LIGHT.

Lebanon Manufacturing Company.

Lebanon, Lebanon county.

Establishment located in Lebanon county.

Whole number of persons employed, from 50 up to 200.

Amount of capital employed in business, $120,000,

Amount paid annually for wages of employés, from $20,000 to $25,000.

Amount paid for materials used in business, $75,000.

Value in dollars of annual product, about $100,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	15	5	3	$1 20	$0 50	38 to 54c	9 to 10	300
Machinsts, (best,)	20	10	3	1 40	27	31 to 46c	9 to 10	300
Machinists, (ordinary,)	5	...	...	1 00	...	...	9 to 10	300
Blacksmiths,	25	...	...	1 50	...	...	9 to 10	300
Blacksmiths, (helpers,)	25	...	...	80	...	...	9 to 10	300
Foreman,	1	...	...	1 50	...	...	9 to 10	300
Engineer,	1	...	...	1 00	...	...	9 to 10	300
Pattern-makers and carpenters,	40	...	...	1 00	...	...	9 to 10	300
Assistants,	25	...	...	75	...	...	9 to 10	300
Laborers, carters,	25	...	...	75	...	...	9 to 10	300
Apprentice,	1	...	...	54	...	...	9 to 10	300

REMARKS.—Our business changes off a great deal. Sometimes we have over 200 men, and then again, only from 50 to 60. When we are building cars, we have the most men, and our wages vary from 25 cents, up to $2 per day, but it is safe to say, that they will not average much over a dollar a day.

LEBANON MANUFACTURING COMPANY,
Per JOHN HUNSICKER.

LACKAWANNA COUNTY.

James M. Everhart, (Established 1853.)

Scranton, Lackawanna county.
Establishment located in Lackawanna county.
Whole number of persons employed, 10.
Amount of capital employed in business, $32,000.
Amount paid annually for wages of employés, $3,000.
Amount paid for materials used in business, $7,100.
Value in dollars of annual product, $12,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Machinist. (best,)	1	.	. . .	$1 75	. . .	. . . .	10	
Blacksmith,	1	. .	. . .	2 00	. . .	. . . .	10	
Foreman,	1	. .	. . .	2 00	. . . .	. . . .	10	
Engineer,	1	. . .	. . .	1 35	. . .	. . . .	10	
Brass founders,	1	. . .	1	1 35	. . . .	$0 85	10	
Fitters,	3	. . .	2	1 85	. . . .	1 00	10	

In operation daily, except holidays and Sundays.

REMARKS.—We are now manufacturing everything in the brass line necessary for engineers, railroads, and miners, the two latter supplies being specialties. Our pneumatic signal gong for mines, furnaces, and factories is meeting with unprecedented success, being now in use in a large number of our leading manufactories and mines in speaking tubes, from one half to three and a half inches, and from one hundred to eighteen hundred feet distance, giving unrivaled satisfaction in every instance. They are a great saving wherever introduced, as the action is simple and instantaneous. They are far more durable than electricity for signaling, and just as reliable.

The "Everhart" miners' safety lamps wherever used, are superseding those in use, as being more safe and reliable.

All brass work made by us, such as globe, angle, and check valves, steam cocks, patent ball gague cocks, steam whistles, etc., are made from very heavy patterns, and of the best materials.

There is no piece work done in our shop, hence the men have time to do their work justice, and as a result thereof, our work still stands where it has for years past, at the head of that vast legion of manufactories—brass.

J. M. EVERHART,
By J. J. HILPERT, *Supt.*

Dickson Manufacturing Company.

Scranton, Lackawanna county.

Establishment located in Lackawanna county, and a branch in Wilkes-Barre, Luzerne county.

Whole number of persons employed, 270.

Amount of capital employed in business, $767,000.

Amount paid annually for wages of employés, $105,000.

Amount paid for materials used in business, $101,684 30.

Value in dollars of annual product, $258,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	21	5	2	$1 80	$0 55	$0 75	9	Every working day.
Iron moulders, (helpers,)	21	...	...	1 15	...	...	9	
Machinists, (best,)	38	1	16	1 75	45	60	9	
Machinists, (ordinary,)	12	...	2	1 45	...	50	9	
Machinists, (inferior,)	9	...	...	1 20	...	...	9	
Machinists, (helpers,)	8	...	...	1 00	...	...	9	
Boiler-makers,	6	1	2	1 66	45	45	9	
Boiler-makers, (helpers,)	4	...	...	1 12	...	...	9	
Riveters,	5	...	...	1 70	...	...	9	
Holders-on,	3	...	...	1 17	...	...	9	
Flanger,	1	...	...	2 20	...	...	9	
Flanger, (helpers,)	4	...	...	1 14	...	...	9	
Blacksmiths,	13	...	...	1 56	...	...	9	
Blacksmiths, (helpers,)	24	...	...	1 19	...	...	9	
Foremen,	10	...	...	*69 47	...	...	9	
Engineers,	4	...	...	*35 00	...	...	9	
Pattern-makers and carpenters,	22	1	...	1 57	...	...	9	
Laborers, (carters,)	19	...	...	1 12	...	...	9	
Brass founder,	1	...	...	2 15	...	...	9	
Brass founder, (helper,)	1	...	...	1 20	...	...	9	
Cupola tenders,	3	...	...	1 55	...	...	9	
Core makers,	4	...	...	1 40	...	...	9	
Steam hammerers,	3	...	...	2 82	...	...	9	
Steam hammerers, (helpers)	4	...	...	1 00	...	...	9	

* Per month.

LYCOMING COUNTY.

Filbert Street Forging and Machine Works.

Williamsport, Lycoming county.
Establishment located in Lycoming county.
Whole number of persons employed, 10.
Amount of capital employed in business, $9,000.
Amount paid annually for wages of employés, $4,500.
Amount paid for materials used in business, $2,000.
Value in dollars of annual product, $7,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Machinists, (best,)	2	...	...	$2 38	....	....	10	Full time.
Machinist, (ordinary,)	1	...	...	2 00	....	....	10	
Machinist, (helpers,)	1	...	...	1 00	....	....	10	
Blacksmiths,	2	...	...	2 00	....	....	10	
Blacksmith, (helper,)	1	...	...	1 00	....	....	10	
Foreman,	1	...	...	2 38	....	....	10	
Engineer,	1	...	..	1 00	....	....	10	
Apprentice,	...	...	1	....	....	*$25 00	10	

* Per month.

REMARKS.—The Filbert Street Forging and Machine Works was established in 1870 as a forge, but increase of our business required the addition of lathes and other iron working machinery. Our business is increasing yearly, notwithstanding the depression of the iron trade throughout the country. The past year shows little improvement in the iron trade, but hope we have got to the point where all our industries must take a new start on a safe and sure basis.

DAVID REID, *Agent.*

LUZERNE COUNTY.

The Union Stove and Manufacturing Company.

Pittston, Luzerne county.
Establishment located in Luzerne county.
Whole number of persons employed, 34.
Amount of capital employed in business, $40,000.
Amount paid annually for wages of employés, $12,000.
Amount paid for materials used in business, $15,000.
Value in dollars of annual product, $50,000.

Classification.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	13		2	*$2 00		*$0 80	10	260
Mounters,	4			2 25			10	260
Mounters, (helpers,)	4			1 00			10	260
Foremen,	2			2 25			10	300
Engineer,	1			1 25			12	300
Pattern-maker and carpenter	1			1 50			10	300
Laborers, (carters,)	7			1 60			. . .	260

* Average.

Remarks.—We make a specialty of stoves, ranges, and light castings. Pay our men weekly. Pay cash for all material. Business has been very satisfactory, and the future looks very bright.

THE UNION STOVE AND MFG. CO.,
By Jno. D. Green.

D. C. Clark & Co.

Hazleton, Luzerne county.

Establishment located in Luzerne county.

Whole number of persons employed, 189.

Amount of capital employed in business, $190,000.

Amount paid annually for wages of employés, $92,210 47.

Amount paid for materials used in business, $167,976 65.

Value in dollars of annual product, $297,396 07.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	22	. . .	. . .	$2 00	. . . .	. .	10	250
Machinists, (best,)	39	. . .	8	2 00	. . . .	$0 75	10	300
Machinists, (helpers,)	5	1	. . .	1 30	$0 75	. . . .	10	300
Boiler-makers,	10	. . .	. . .	2 00	. . . .	. . . .	. . .	275
Boiler-makers helpers,	6	. . .	. . .	1 50	. . . .	. . . .	10	275
Blacksmiths,	7	. . .	. . .	2 15	. . . .	. . . .	10	300
Blacksmiths helpers,	9	. . .	. . .	1 25	. . . .	. . . .	10	300
Engineers,	2	. . .	. . .	1 87	. . . .	. .	10	312
Pattern-makers and carpenters,	29	. . .	. . .	2 20	. . . .	. . . .	10	300
Assistants,	9	. . .	. . .	1 45	. . . .	. . . .	10	300
Laborers, carters,	34	. . .	. . .	1 25	. . . .	. . . .	10	300
Forgemen,	4	. . .	. . .	2 50	. . . .	. . . .	10	250
Draughtsman;	1	. . .	. . .	3 00	. . .	. . . .	10	312
Painters,	2	. . .	. . .	2 75	. . . .	. . . .	10	312
Clerk,	1	. .	. . .	3 00	. . .	. . . .	10	312

D. CLARK & CO.

Robert R. Frear.

Wyoming, Luzerne county.

Establishment located in Luzerne county.

Whole number of persons employed, 2.

Amount of capital employed in business, $2,000.

Amount paid annually for wages of employés, $300.

Amount paid for materials used in business, $350.

Value in dollars of annual product, $1,500.

Iron moulders—number of men, 1; daily wages paid, $1 50; hours worked per day, 10; days in operation, 100. Pattern-maker and carpenter, 1; hours worked per day, 10.

REMARKS.—Manufacture plows and cultivators, for custom only local in extent. Business exceedingly dull.

R. R. FREAR.

Boyd & Engel.

Mill Hollow, Luzerne county.

Establishment located in Mill Hollow, Luzerne county.

Whole number of persons employed, 2.

Amount of capital employed in business: Our capital is our sales; no funds in treasury.

Amount paid annually for wages of employés, $750.

Amount paid for materials used in business, $450.

Value in dollars of annual product, $1,460.

Iron moulders—Number of men, 1; daily wages paid, $1 50; hours worked per day, 10. Pattern-maker, laborer, and superintendent, 1; daily wages paid, $2; hours worked per day, 10.

REMARKS.—We have one ten horse power engine; we could turn out two tons per week; we have one lathe. But times are very dull at present.

BOYD & ENGEL,
Per G. W. ENGEL.

Vulcan Iron Works.

Wilkes-Barre, Luzerne county.

Establishment located in Luzerne county.

Whole number of persons employed, 41.

Amount of capital employed in business, $180,950.

Amount paid annually for wages of employés, $17,431 24.

Amount paid for materials used in business, $20,795 26.

Value in dollars of annual product, $44,511 96.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders, ...	6	. . .	1	$1 25 & 1 80	. . .	$0 50	9	307
Machinists, (best,)	4	. . .	3	1 80	. . .	50 to 1 00	9	307
Machinists, (ordinary,) . .	3	. . .	. .	1 60 to 1 75	. . .	. . . .	9	307
Machinists, (inferior,) . . .	3	. . .	. .	1 25 to 1 50	. . .	. . . .	9	307
Machinists, (helpers,) . . .	2	. . .	. .	1 20 to 1 45	. . .	. . . .	9	307
Boiler-makers, ...	2	. . .	. .	1 45 to 1 50	. . .	. . . .	9	307
Boiler-maker, (helper,) . .	1	. . .	. .	1 20	. .	. . . .	9	307
Blacksmiths, ...	2	. . .	. .	1 50 to 2 00	. . .	. . . .	9	307
Blacksmiths, (helpers,) . .	2	. . .	. . .	1 20	. . . .	. . . .	9	307
Fireman, ...	1	. . .	. . .	1 20	. . . .	. . . .	9	307
Teamster, ...	1	. . .	. . .	1 25	. . . .	. . . .	9	307
Pattern-makers & carpenters,	2	. . .	. .	2 00 to 2 15	. . .	. . . .	9	307
Laborers, carters, ...	4	. . .	. . .	1 20	. . . .	. . . .	9	307
Watchman, ...	1	. . .	. . .	1 20	. . . .	. . . .	9	307

Wyoming Valley Manufacturing Company.

Wilkes-Barre, Luzerne county.

Establishment located in Wilkes-Barre, Luzerne county.

Whole number of persons employed, 35.

Amount of capital employed in business, $133,449.

Amount paid annually for wages of employés, $10,700.

Amount paid for materials used in business, $10,783.

Value in dollars of annual product, about $23,000.

Classification.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	3	...	4	$0 16 to 1 80	....	$0 75 to 1 38		
Machinists, (ordinary,)	5	...	4	1 50 to 2 70	....	75 to 1 25		
Boiler-makers,	2	1	..	1 80 to 2 00	$0 75			
Blacksmith,	1	...	..	1 75 to 2 25				
Blacksmith, (helper,)	1	...	...	1 30				
Foreman. Pattern-maker & carpenter,	1	...	1	2 25	....	1 25		
Laborers, carters,	6	...	..	1 20 to 1 40				

Remarks.—Machine shop, foundry, and blacksmith shop.

R. SHARPE, Junior,
Treasurer.

William B. & P. B. Seward.

Harveyville, Luzerne county.

Establishment located in Harveyville, Luzerne county.

Whole number of persons employed, 1.

Amount of capital employed in business, $200.

Amount paid annually for wages of employés, $60.

Amount paid for materials used in business, $50.

Value in dollars of annual product, $150.

Iron moulder, 1; daily wages paid men, 76 cents; hours worked per day, 10; days in operation during year.

WILLIAM B. & P. B. SEWARD.

Samuel Benner.

Conyngham, Luzerne county.

Establishment located in Conyngham, Luzerne county.

Whole number of persons employed, 3.

Amount of capital employed in business, $3,000.

Amount paid annually for wages of employés, $900.

Amount paid for materials used in business, $800.

Value in dollars of annual product, $2,400.

One iron moulder, one apprentice—work by the piece; one plow-maker, daily wages, $2 00.

REMARKS.—Mostly plows and plow castings, stove grates, iron kettles, iron fencing, &c.

SAMUEL BENNER.

MIFFLIN COUNTY.

J. W. Pincin & Son.

McVeytown, Mifflin county.

Establishment located in McVeytown, Mifflin county.

Whole number of persons employed, 4.

Amount of capital employed in business, $4,000.

Amount paid annually for wages of employés, $1,120.

Amount paid for materials used in business, $450.

Value in dollars of annual product, $2,100.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	2	...	...	$1 50	....	....	10	150
Machinist, (best,)	1	...	...	2 00	....	....	10	200
Pattern-maker and carpenter,	1	...	...	2 00	....	....	10	200

J. W. PINCIN & SON.

Granville Foundry and Machine Shops.

Granville, Mifflin county.

Establishment located in Mifflin county.

Whole number of persons employed, 3.

Amount of capital employed in business, $1,000.

Amount paid annually for wages of employés, $100.

Amount paid for materials used in business, $50.

Value in dollars of annual product, $200.

Iron moulders—number of men, 2; daily wages paid, $1 50; days in operation, 60. Blacksmiths—number of men, 1; daily wages paid, $1 50; days in operation, 10.

Characteristics.—The main characteristics of my establishment this season, like many others, has been a want of something to do, and a consequent suspension of operation the greater part of the year. The principal work I have done this season, has been a light business in the manufacture of plows, and plow repairs.

HENRY SELICK.

Wm. B. Harman.

Belleville, Mifflin county.
Establishment located in Belleville, Mifflin county.
Whole number of persons employed, 2.
Amount of capital employed in business, $2,000.
Amount paid annually for wages of employés, $550.
Amount paid for materials used in business, $650.
Value in dollars of annual product, $2,200.

Classification.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder,	1	. . .	. .	$1 50	. . . .	. . . .	10	300
Flangers helper,	1	. . .	. . .	50	. . . .	. . . .	10	180
Pattern-maker and carpenter,	1	. . .	. . .	1 25	. . . .	. . . .	10	90

Remarks.—In making out my report last year, I got everything too low, as I had never kept an account of money invested, or paid out, or taken in. I have tried to give you a correct report of the last year's business. Business with me has been very favorable the last year. I manufacture nothing but plain work, such as plows, furnace plates, sash weights, and sled soles.

W. B. HARMAN.

MONTGOMERY COUNTY.

William S. Ellis.

Pottstown, Montgomery county.

Establishment located in Pottstown, Montgomery county.

Whole number of persons employed, 10.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $3,500.

Amount paid for materials used in business, $4,000.

Value in dollars of annual product, $11,000.

Iron moulders—number of men, 7; number of boys, 3; daily wages paid men, $1 60; daily wages paid boys, 75 cents; hours worked per day, 10; days in operation during year, 280. Pattern-maker and carpenter, 1.

CHARACTERISTICS OF ESTABLISHMENT.—Jobbing shop, iron and brass castings of all descriptions. Owing to the dull times, are only employing about half force of workmen.

WM. S. ELLIS.

Montgomery Works.

William T. Bate & Son, Conshohocken, Montgomery county.

Establishment located in Conshohocken, Montgomery county.

Whole number of persons employed, 27.

Amount of capital employed in business, $45,000.

Amount paid annually for wages of employés, $1,100.

Amount paid for materials used in business: Plate iron, about $3,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	3	...	1	$2 16⅔	....	$1 20	10	293
Machinists, (best,)	2	...	...	2 16⅔	....	....	10	293
Boiler-makers,	5	...	..	2 00 and 2 33⅓	...	....	10	293
Boiler-makers, (helpers,)	9	2	..	1 00 and 1 50	$0 50 and 63⅓	...	10	293
Blacksmith,	1	...	...	2 00	....	....	10	293
Foreman,	1	...	...	3 33⅓	....	....	10	293
Engineer,	1	...	...	2 10	....	....	10	293
Pattern-maker and carpenter	1	...	...	2 33⅓	....	....	10	293
Fitter,	1	...	...	2 00	....	....	10	

NOTE.—Riveters, same as boiler-makers; holders-on, same as helpers; flangers, same as boiler-makers; flangers, (helpers,) same as boiler-makers, (helpers;) blacksmiths, (helpers,) same as boiler-makers, (helpers.)

REMARKS.—We make a specialty of boilers and heaters, and grate bars. Do all kinds of plate and sheet iron work, and make castings of every description. Our works have been established here since 1868. Our production this year has been equal to and greater in some respects than that of last year, but prices are very low, and it is a difficult matter to get a fair price for good work.

W. T. BATE & SON.

Ellis Keystone Agricultural Works.

Pottstown, Montgomery county.
Establishment located in Pottstown, Montgomery county.
Whole number of persons employed, 14.
Amount of capital employed in business, $25,000.
Amount paid annually for wages of employés, $5,000.
Amount paid for materials used in business, $4,000.
Value in dollars of annual product, $12,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Machinists, (best,)	2	. . .	. . .	From 15 to 16 cents per hour.	. . .	. . .	10	Every working day in the year.
Machinist, (ordinary,)	1	. . .	. . .		. . .	. . .	10	
Blacksmith,	1	. . .	. . .		. . .	. . .	10	
Foreman,	1	. . .	. . .		. . .	. . .	10	
Engineer,	1	. . .	. . .		. . .	. . .	10	
Pattern-makers and carpenters,	4	. . .	. . .		. . .	. . .	10	
Apprentices,	. . .	1	1		$0 50	$0 50	10	

REMARKS.—Our prospects for the coming year are good, having obtained foothold in new territory for our celebrated "Champion Thresher and Cleaner," which, added to sections already using our machines, will give us a demand for all we can do with present facilities. From close observation we conclude that bottom has been reached, and have reason to hope that in the near future there is good times for all classes.

SOMERSET COUNTY.

Michael Hay & Co.

Elk Lick, Somerset county.
Establishment located in Salisbury, Somerset county.

Whole number of persons employed, 7.

Amount of capital employed in business, $10,000.

Amount paid annually for wages of employés, $3,000.

Amount paid for materials used in business, $1,000.

Value in dollars of annual product, $6,000.

Iron moulders, men, 2; daily wages paid men, $1 50; hours worked per day, 10; days in operation during year, 300; machinist, (best,) 1; blacksmith, 1; foreman and salesman, 1; laborer, carter, 1; teamster, 1.

REMARKS.—Stock company, but not incorporated. Make stoves, plows, threshing machines, cultivators, mill castings, sugar pans, field rollers, &c.

M. HAY & CO.

J. S. Hartzell.

Addison, Somerset county.

Establishment located in Petersburgh, Somerset county.

Whole number of persons employed, 6.

Amount paid annually for wages of employés, $1,600.

Amount paid for materials used in business, cannot say definitely, as have not kept account.

Value in dollars of annual product, this year about $6,000.

Iron moulders, men, 2; daily wages paid men, $1 37; in operation during year, 10 months; blacksmiths, by piece work; 1 plow stocker, by piece work; engineer and plow grinder, man, $1 per day; laborers, carters, men, 2, $1 per day, each.

REMARKS.—Owing to stringency of money market, have not pushed business as would, had there been more money in circulation. The credit system, in this country where I am located, is entirely too prevalent, most parties buying, exacting credit if possible. Prices of articles manufactured, have also deteriorated in value from ten to fifteen per cent. My business this year, has been mainly in plows and plow castings.

J. S. HARTZEL.

C. Krissinger.

Berlin, Somerset county.

Establishment located in Berlin, Somerset county.

Whole number of persons employed, 3.

Amount of capital employed in businsss, $5,000.

Amount paid annually for wages of employés, $700.

Amount paid for materials used in business, $800.

Value in dollars of annual product, $3,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder, ...	1	. . .	. . .	$1 50	. . .	. . .	10	200
Machinist, (ordinary,) . . .	1	. . .	. . .	1 33⅓	. . .	. . .	10	
Pattern-maker and carpenter	1	. . .	. . .	2 00	. . .	. . .	10	50

SUSQUEHANNA COUNTY.

Barnes Manufacturing Company.

(S. H. Barnes and Luther Barnes.)
Lanesboro', Susquehanna county.
Establishment located in Susquehanna county.
Whole number of persons employed, 9.
Amount of capital employed in business, about $30,000.
Amount paid annually for wages of employés, about $3,500.
Amount paid for materials used in business, about $2,000.
Value in dollars of annual product, about $6,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders, ...	1	1	. . .	$2 25	$0 75	. . .	10	310
Machinist, (best,)	2	. . .	. . .	2 25	. . .	. . .	10	310
Machinist, (ordinary,) . . .	1	. .	. . .	2 00	. . .	. . .	10	310
Machinist, (helper,)	1	. . .	. . .	1 00	. . .	. . .	10	310
Pattern-maker and carpenter, ...	1	. . .	. . .	2 25	. . .	. . .	10	310
Laborers—carters, ...	2	. . .	. . .	1 00	. . .	. . .	10	310

Wm. S. Mead.

New Milford, Susquehanna county.
Establishment located in Susquehanna county.
Whole number of persons employed, 4.
Amount of capital employed in business, $800.
Amount paid annually for wages of employés, $100.
Amount paid for materials used in business, $100.
Value in dollars of annual product, $700.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	2	. . .	. . .	. . . .	. . . .	. . . .	7	150
Foreman,	1	. . .	. . .	. . . .	. . . .	. . . .	7	150
Pattern-maker and carpenter,	1	. . .	. . .	$1 75	. . . .	. . . .	10	30
Laborer—carter,	1	. . .	. . .	1 00	. . . .	. . . .	10	30

W. S. MEAD.

TIOGA COUNTY.

T. J. Mooers.

Blossburg, Tioga county.

Establishment located in Blossburg, Tioga county.

Whole number of persons employed, 5.

Amount of capital employed in business, $5,000.

Amount paid annually for wages of employés, $1,600.

Amount paid for materials used in business, $3,000.

Value in dollars of annual product, $5,000.

Iron moulders—number of men, 3; daily wages paid, $1 25; hours worked per day, 10; days in operation, 300. Laborers—carters, 2; daily wages paid, $1 25; hours worked per day, 10; days in operation, 300.

REMARKS.—Manufacturing railroad castings, mine castings, plows, sleigh shoes, and job work of all descriptions, to accommodate the public. Prices down so low, that foundry business is in the drag. Foundry business is over-done, by their being twice the number of foundries needed. Castings are made for cost price, and in some foundries, below cost, all expecting better times. It will not be any better until about half of the foundries are closed up, and I read of a number being closed that have been making castings below cost.

S. A. Gleason.

Knoxville, Tioga county.

Establishment located in Knoxville, Tioga county.

Number of persons employed, from 3 to 5, as occasion demands.

Amount of capital employed in business, about $2,000.

Amount paid annually for wages of employés, about $1,200.

Amount paid for materials used in business, about $1,200.

Value in dollars of annual product. I can only guess at this, as I have kept no account of sales—from $3,000 to $3,500.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	2	...	...	$1 25	...	...	10	240
Machinist, (ordinary,)	1	...	...	1 50	...	...	10	60
Blacksmith,	1	...	...	1 25	...	...	10	40
Engineer,	1	...	...	1 00	...	...	10	50
Pattern-maker and carpenter	1	...	...	1 50	...	...	10	120
Laborer, carter,	1	...	...	1 00	...	...	10	112
Fitter and turner,	1	..	...	1 25	...	...	10	85

NOTE.—My men all work at various branches at different times; sometimes all in the wood shop, and again all in the furnace, as moulders. I will approximate, however, no boys, no apprentices.

REMARKS.—A small foundry, making box stoves and general work, but principally plows and machinery repairs. The most of the work is done in the casting department, rented by S. A. Gleason. The property is worth $4,000.

SOLOMON A. GLEASON.

James Kinsey.

Lawrenceville, Tioga county.

Establishment located in Lawrenceville, Tioga county.

Number of persons employed: I do my own work, employ no steady help.

Amount of capital employed in business: Capital, including shop and machinery, $4,500.

Amount paid annually for wages of employés: Amount of wages, about $200.

Amount paid for materials used in business: I use no new iron, but old bought in.

Value in dollars of annual product, about $500.

REMARKS.—This establishment was started in 1840, when lumber was plenty, and saw-mill building was all the go. Furnace business was then a good business, making and finishing mill castings, and casting bale sled shoes and making plows; now the lumbering is all gone. Plows and other fancy agricultural implements are brought in from the State of New York, so that small establishments like mine are used up.

I only cast eight times in the last year, getting a moulder from another place to mould up a heat, which would take four or five days for each heat, and cast about 1,500 pounds at a heat, using no new iron, only old bought in for work.

JAMES KINSEY.

UNION COUNTY.

Slifer, Walls & Shriner Manufacturing Company.

Lewisburg, Union county.

Establishment located in Union county.

Whole number of persons employed, 40.

Amount of capital employed in business, $60,214.

Amount paid annually for wages of employés, $10,235.

Amount paid for materials used in business, $15,000.

Value in dollars of annual product, about $40,000; difficult to give, because of commission business.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	5	...	...	*$2 00	....	....	10	300
Machinists, (best,)	2	...	...	1 80	....	....	9	
Machinists, (ordinary,)	7	...	...	1 25	....	....	9	
Machinists, (inferior,)	3	...	...	1 10	....	....	9	
Machinists, (helpers,	3	...	...	1 00	....	....	9	
Blacksmiths,	3	...	...	1 60	...	...	9	
Blacksmiths, helpers,	2	...	...	1 25	....	....	9	
Foremen,	2	...	...	2 25				
Engineer,	1	...	...	1 25				
Pattern-makers and carpenters,	5	..	...	1 50				
Laborer, carter,	1	...	...	1 25				
Watchman,	1	...	...	1 10				
Painters,	5	...	...	1 40				

* Average.

REMARKS.—Our business has been very dull since 1874, being entirely confined to agricultural implements. The failure of the wheat crop in our section (destroyed by the fly) for three years, has caused the failure of at least twenty-five per cent. of all our tenant farmers, and of many owners of farms, who had not fully paid for them. In 1872, we employed over 80 hands, and our product sold for over $84,000. The rate of wages paid by us, is considered good here.

SLIFER, WALLS & SHRINER MANUF'G CO.,

S. D. BATES, *Supt.*

Stayman & Zimmerman.

Mifflinburg, Union county.

Establishment located in Mifflinburg, Union county.

Whole number of persons employed, 10.

Amount of capital employed in business, $8,000.

Amount paid annually for wages of employés, $1,660.

Amount paid for materials used in business, $1,500.

Value in dollars of annual product: Can give no exact estimate.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder,	1	. . .	. . .	$1 25	. . . .	. . . .	10	280
Machinist, (best,)	2	. . .	. . .	2 00	. . . .	. . . .	10	290
Machinist, (helper,)	1	. . .	. . .	1 25	. . . .	. . . .	10	290
Blacksmith,	1	. . .	. . .	1 25	. . . .	. . . .	10	30
Engineers,	. . .	2	. . .	. .	$0 50	. . . .	10	145
Pattern maker,	1	. . .	. . .	2 00	. . . .	. . . .	10	290
Carpenters,	2	. . .	. . .	1 25	. . . .	. . . .	10	290
Wood turner,	1	. . .	. . .	2 00	. . . .	. . . .	10	25

REMARKS.—Business has been tolerably brisk, but had to be done at low prices, hence the profits have been very small. We do a good trade at present in cultivators, and much of our time has been devoted to the manufacturing of them.

NORTHUMBERLAND COUNTY.

George Rohrbuck & Sons.

Sunbury, Northumberland county.

Establishment located in Sunbury, Northumberland county.

Whole number of persons employed, 5.

Amount of capital employed in business, $7,000.

Amount paid annually for wages of employés, $1,500.

Amount paid for materials used in business, $1,800.

Value in dollars of annual product, $4,200.

Iron moulders, 2; daily wages paid, $2 00. Machinist, (best,) 1; daily wages paid, $2 50. Pattern-maker and carpenter, 1; daily wages paid, $2 00. Laborer, 1; daily wages paid, $1 00. Hours worked per day, 10. Days in operation during year, 243.

GEORGE ROHRBUCK & SONS.

C. E. Parker.

Shamokin, Northumberland county.
Establishment located in Northumberland county.
Whole number of persons employed, 8.
Amount of capital employed in business, $1,000.
Amount paid annually for wages of employés, $3,000.
Amount paid for materials used in business, $3,008 76.
Value in dollars of annual product, $7,200.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulder,	1	...	...	$1 66⅔	....	....	10	300
Machinist, (best,)	1	...	...	1 50	....	....	10	300
Boiler-maker,	1	...	...	1 50	....	....	10	300
Blacksmith,	1	...	...	2 00	....	....	10	300
Blacksmith helper,	1	...	...	1 00	....	....	10	300
Foreman,	1	...	...	2 00	....	....	10	300
Pattern-maker and carpenter	1	...	...	1 25	....	....	10	300
Laborers—carters,	3	...	...	1 00				
Apprentices,	...	...	1	....	....	$0 50	10	300

REMARKS.—Manufacture steam engines, boilers, drift cars, wire screens, fans, mine, saw-mills, grist-mill, gearing, home castings and castings of all descriptions, brass or iron, forgings, and general repairs.

C. E. PARKER.

NORTHAMPTON COUNTY.

Lehigh Stove and Manufacturing Company.

Bethlehem, Northampton county.
Establishment located in Lehighton, Carbon county.
Whole number of persons employed, 21.
Amount of capital employed in business, $66,000—stock.
Amount paid annually for wages of employés, $9,996 64.
Amount paid for materials used in business, $6,695 42.
Value in dollars of annual product, $22,028 73.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	9	. . .	2	. . . . .	. . . . .	. . . . .	10	275
Foreman,	1	. . .	. . .	. . . . .	. . . . .	. . . . .	10	275
Engineer,	. . .	1	. . .	. . . . .	. . . . .	. . . . .	10	275
Pattern-maker and carpenter	1	. . .	. . .	. . . . .	. . . . .	. . . . .	10	275
Laborers,	5	. . .	. .	. . . . .	. . . . .	. . . . .	10	275

WYOMING COUNTY.

Miller & Avery.

Tunkhannock, Wyoming county.

Establishment located in Tunkhannock, Wyoming county.

Whole number of persons employed, 6 with proprietors.

Amount of capital employed in business, $6,000.

Amount paid annually for wages of employés, $1,500.

Amount paid for materials used in business, $800.

Value in dollars of annual product, $3,000.

Iron moulder, 1; daily wages, $2 00; days worked during year, 200. Machinists, (best,) 2; daily wages, $1 50; days worked during year, 250. Pattern-makers and carpenters, 2; daily wages, $2 25; days worked during year, 250. Laborer, 1; daily wages, $1 50; days worked during year, 300. Hours worked per day, 10.

REMARKS.—In the foregoing calculation, the wages of the proprietors are not counted in the sum paid annually, but are put down, the same as men employed, in the classification. Business has been very good, but most of the sales have been made on time—not much stock left over. We do a general business, such as repairing all kinds of machinery, manufacture lows, threshing machines, both two and one-horse tread powers, threshers and cleaners, bark-mills, field rollers. Have a general agricultural shop.

MILLER & AVERY,
Per G. C. MILLER.

YORK COUNTY.

Variety Iron Works.—E. G. Smyser, Proprietor.

York, York county.

Establishment located in York county.

Whole number of persons employed, average 80.

Amount of capital employed in business, $130,000.

Amount paid annually for wages of employés, $27,000.

Amount paid for materials used in business, $29,200.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men, average.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day, average.	Days in operation during year.
Iron moulders,	19	2	2	$2 00	$0 30	$0 30	9½	295
Machinists, (best,)	8	...	2	2 25	....	30	9	295
Machinists, (ordinary,)	6	...	...	1 90	....	....	9	295
Machinists, (inferior,)	3	...	...	1 50	....	....	9	295
Machinists, (helpers,)	6	...	...	1 25	....	....	9	295
Blacksmith,	1	...	...	2 50	....	....	9	295
Blacksmith, (helper,)	1	...	...	1 25	....	....	9	295
Foremen,	3	...	...	3 50	....	...	9	300
Engineer,	1	...	...	1 80				
Pattern-makers & carpenters,	4	..	...	2 20	....	....	9	290
Pattern-makers & carpenters, (assistants,)	2	...	...	1 70	....	....	9	100
Laborers—carters, packers, clerks, &c.,	18	...	..	1 30	...	....	9	290
Millwrights,	2	...	...	2 00	....	....	9	290

REMARKS.—The statements made are approximate, but think they are nearly accurate. The name of the works, "Variety Iron Works," is characteristic of the establishment. Castings, in weight from ½ ounce to 20 tons, are made. Architectural, ornamental iron buildings a speciality. Mill machinery enters largely in the work made. We make no engines or boilers.

E. G. SMYSER.

Nathaniel Weigle.

York, York county.

Establishment located in York county.

Whole number of persons employed, 25.

Amount of capital employed in business, $5,400.

Amount paid annually for wages of employés, $4,500.

Amount paid for materials used in business, $13,000.

Value in dollars of annual product, $20,000.

Carpenters and builders, 22 men and 3 apprentices; daily wages paid men, $1 55; daily wages paid apprentices, 60 cents; hours worked per day, 10; days in operation during year, 289.

REMARKS.—The business is building, manufacturing sash, blinds, doors, inside and outside shutters, working mouldings, flooring and weatherboarding, turning, shaping, and scroll sawing, also stair building. Have been actively employed during the past spring and summer.

Frey, Motter & Co.

York, York county.

Establishment located in York county.

Whole number of persons employed, 10.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $5,000.

Amount paid for materials used in business, $15,000.

Value in dollars of annual product, $23,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Machinists, (best,)	4	. . .	1	$2 00	. . .	$0 66	10	300
Riveters,	2	. . .	. . .	1 50	. . .	. . .	10	300
Flangers,	2	. . .	. . .	1 50	. . .	. . .	10	300
Flanger, (helper,)	. . .	. . .	1	. . .	. . .	44	10	300
Engineer,	1							

Isaac Frazer

Etters P. O., York county.

Establishment located in Goldsboro', York county.

Whole number of persons employed, 33.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $7,000.

Value in dollars of annual product, $60,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Foremen,	2	. . .	. . .	$1 75	. . .	. . .	10	180
Sawyers,	7	. . .	. . .	1 60	. . .	. . .	10	180
Engineers,	2	. . .	. . .	1 65	. . .	. . .	10	180
Carpenters,	4	. . .	. . .	1 25	. . .	. . .	10	180
Helpers and laborers,	18	. . .	. . .	1 00	. . .	. . .	10	180

Pennsylvania Agricultural Works.

York, York county.
Establishment located in York county, and Macon, Ga.
Whole number of persons employed, 275.
Amount of capital employed in business, $250,000.
Amount paid annually for wages of employés, $90,000.
Amount paid for materials used in business, $280,000.
Value in dollars of annual product, average $400,000.

CLASSIFICATION.	Number of men.	Number of boys.	Number of apprentices.	Daily wages paid men.	Daily wages paid boys.	Daily wages paid apprentices.	Hours worked per day.	Days in operation during year.
Iron moulders,	35	2	5	$1 50	$0 50	$0 33⅓ to 75	10	300
Machinists, (best,)	25	. . .	. . .	1 75	. . . .	. . . .	10	325
Machinists, (ordinary,)	20	6	. . .	1 30	50	. . .	10	325
Machinists, (inferior,)	10	. . .	. . .	1 00	. . . .	. .	10	325
Blacksmiths,	30	5	3	1 50	50	75	10	315
Blacksmiths, (helpers,)	5	2	. . .	1 00	50	. . . .	10	315
Foremen,	4	. . .	. . .	2 75	. . . .	. . . .	10	325
Engineers,	2	1	. . .	1 30	50	. . . .	10	325
Pattern-makers and carpenters,	55	6	3	1 30	40	75	10	320
Pattern-makers and carpenters, (assistant,)	15	5	. . .	1 00	40	. . .	10	300
Laborers, (carters,)	11	2	. . .	1 00	40	. . .	10	300
Grinders and polishers,	13	5	. . .	90	50	. . . .	10	280
General assistants,	5	. . .	. . .	1 00	. . . .	. . . .	10	300

REMARKS.—My specialties are portable steam engines, threshing machines, and standard agricultural implements generally. The business has regularly increased, say twenty-five per cent. yearly, for twenty years past—since first started—and export trade has increased in still greater ratio, until it now forms about one third of my manufactures. Suppose I am the largest manufacturer of plows, for export, in the United States. Profits, however, are exceedingly small, and, except in export trade, where there is comparatively no risk at all, the risk is greater than I have ever known it.

A. B. FARQUHAR.

BLAST FURNACES.

ARMSTRONG COUNTY.

Brown & Mosgrove.

Kittanning, Armstrong county.

Establishment located in Armstrong county,

Whole number of persons employed, 120 men and boys.

Amount of capital employed in business, $75,000.

Amount paid annually for wages of employés, $30,000.

Amount paid for materials used in business, $32,000.

Number of tons and value of annual products, 28,000 tons; worth, at present prices, about $48,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1	Five drivers in mines.	From $1 40 to $2 25.	75 cents.	9 to 12 hours.	330 days.	Blowing up stock to close business, on account of low price of metal. Have been running furnace at a loss the last three years.
Foundryman,	1						
Keepers,	2						
Fillers,	4						
Guttermen,	2						
Stocker,	1						
Cinderman,	1						
Engineers,	2						
Blacksmiths,	2						
Carpenter,	1						
Ore miners,	80						
Laborers,	6						
Coal miners,	16						

BROWN & MOSGROVE.

F. B. & A. Laughlin.

Mahoning, Armstrong county.

Establishment located in Armstrong county.

Whole number of persons employed, 35.

Amount of capital employed in business, $50,000.

Amount paid annually for wages of employés, $18,000.

Amount paid for materials used in business, $33,500.

Number of tons and value of annual products, 3,000 tons; value, $52,800.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. .	*$71 00				
Foundryman,	1	. .	*66 00				
Keepers,	2	. .	1 58	. . .	12	11 mos.	
Fillers,	4	. .	†15	. . .	. . .	11 mos.	
Guttermen,	2	. .	1 50	. . .	. . .	11 mos.	
Stockers,	2	. .	†21½	. . .	. . .	11 mos.	
Engineers,	2	. .	1 65	. . .	. . .	11 mos.	
Blacksmiths,	2	. .	*55 50	. . .	. . .	12 mos.	
Carpenter,	1	. .	1 35	. . .	. . .	275	
‡Ore miners.							
Laborers,	13	2	1 45	$0 75	10	300	
Kook-keeper,	1	. .	*71 00				
Clerks in store,	2	. .	*30 00				

* Per month. † Per ton of metal.

‡ We buy our ore delivered at the furnace, by the ton, and have no account of the number of men and boys engaged in mining it.

BERKS COUNTY.

Monocacy Furnace Company.

Monocacy Station, Berks county.

Establishment located in Berks county.

Whole number of persons employed, 40.

Amount paid annually for wages of employés, $16,000.

Amount paid for materials used in business, $150,000.

Number of tons of annual products, 8,640 tons of 2,240 pounds.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1					Furnace in blast the entire year.	
Keepers,	2	...	$1 50	...	12		
Keepers, (helpers,)	2	...	1 30	...	12		
Fillers,	8	..	1 20 and 1 25	..	12		
Cindermen,	4	...	1 30	...	12		
Engineers,	2	..	1 40 and 1 75	..	12		
Blacksmith,	1	...	1 50	...	10		
Carpenter,	1	...	1 40	...	10		
Laborers and carters,	15 to 20	.	90 and 1 10	..	10		
Weighmen,	2	...	1 20	...	10		
Car man,	1	...	1 40	..	10		
Stable man,	1	...	1 50	...	10		

J. BARCLAY HACKER, *President.*

Temple Iron Company.

Temple, Berks county.

Establishment located in Berks county.

Whole number of persons employed, 2.

Amount of capital employed in business, about $10,000 in ore and materials.

Amount paid annually for wages of employés, about $1,200, not including mines.

Amount paid for materials used in business, about $6,000 at furnace and about $4,000 in ore at mines.

REMARKS.—We have been out of blast since May 17, 1875. Are mining hematite iron ore at our mines, and selling it. Employ about 100 men at present at the mines, but indirectly. We have the ore mined by contractors, who employ their men, at a labor cost of about $1,600 per month; 60 cents per day for 10 hours work at present. During the summer, wages were 65 cents per day for 11 hours work. There is no one employed at the furnace but the writer, and a laborer or watchman. We are ready to blow in at a notice of five days, and are willing as soon as a legitimate competition only must be encountered, when old stocks of iron are cleaned away, and when the demand for iron is sufficient to use up stocks as they are made by good located, economical furnace companies.

JEROME L. BOYER, *Secretary.*

Reading Iron Works.

Philadelphia.

Establishment located in Reading, Berks county.

Whole number of persons employed, 136.

Amount paid annually for wages of employés, $8,988 34, for 4 months run for employés of furnace and mines.

Number of tons and value of annual product, 3,114 tons for 4 months run, December estimated.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager, ...	1	. . .	$6 85				
Foundryman, ...	1	. . .	3 29				
Keepers, ...	2	. . .	1 20	. . .	12		
Keepers, helpers, . . .	2	. . .	1 08	. . .	12		
Fillers, ...	2	. . .	1 04	. . .	12		
Guttermen, ...	2	. . .	1 00	. . .	12		
Stockers, ...	6	. . .	1 00	. . .	12		
Cinderman,*	1						
Engineers, ...	2	. . .	1 20	. . .	12		
Blacksmith, ...	1	. . .	1 82	. . .	10		
Blacksmith, helper, .	1	. . .	90	. . .	10		
Carpenters, ...	2	. .	1 80 1 35		10		
Ore miners, ...	95	. . .	1 20	. . .	10		
Laborers, ...	12	. . .	80	. . .	10		
Weighmen, ...	2	. . .	1 00	. . .	12		
Car conductor, ...	1	. . .	1 25	. . .	10		
Night boss, . . .	1	. . .	1 20	. . .	12		
Cart, horse, and driver,	1	. . .	1 50	. . .	10		
Clerk, ...	1	. . .	1 07	. . .	10		

* Cinders taken away by contract, at $7 50 per 24 hours.

Ferguson, White & Co.

Robesonia Furnaces, Berks county.

Establishment located in Berks county.

Whole number of persons employed, 60.

Number of tons and value of annual product, 4,850 tons of 2,240 pounds. value, about $85,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foundryman,	1		$2 33			350	One furnace in blast 245 days; out of blast 120 days.
Keepers,	2		1 60			245	
Keepers, helpers,	3		1 25			245	
Fillers,	8		1 25			245	
Cindermen,	4		1 25			245	
Engineers,	2		1 75			245	
Blacksmith,	1		1 75			313	
Carpenters,	2		1 75			313	
Ore miners,	16		1 15	$0 60		313	
Laborers,	17		1 10			313	
Weighman,	1		11 ꝑ ton			245	
Clerks,	2					350	

Lelbrandt & McDowell.

Moselem, Berks county.

Establishment located in Berks county.

Whole number of persons employed, 71 men and boys.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $24,000.

Amount paid for materials used in business, $86,000.

Number of tons of annual products, 9,000 tons iron.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	2						One cast January 17, and blew out March 15, 1878.
Foundryman,	1		$1 66		9½	74	
Keepers,	2		1 00		9½	74	
Keepers, (helpers,)	2		90		9½	74	
Fillers,	8		85		9½	74	
Stockers,	2		75		9½	74	
Cindermen,	4		1 00		9½	74	
Engineers,	2		90		9½	74	
Blacksmiths,	2		1 00			74	
Carpenters,	2		1 00		9½	74	One employed 74 days and the other 240 days.
Ore miners,	38	2	contr.	$0 45		240	Paid per car hoisted.
Laborers,	3		75		9½	240	
Weighman,	1		contr.			74	Paid per ton iron made.

REMARKS.—The amount given as expended for material is only approximate, as the furnace, in present condition, has never been in blast.

Keystone Furnace Company.

Reading, Berks county.
Establishment located in Reading, Berks county.
Whole number of persons employed, 54—including office help.
Amount of capital employed in business, $60,000.
Amount paid annually for wages of employés, $26,900.
Amount paid for materials used in business, $209,725.
Number of tons and value of annual product, 13,989 tons; $223,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Keepers,	4	. . .	$1 20	. . .	12	365	
Keepers, (helpers,)	4	. . .	1 00	. . .	12	365	
Fillers,	28	. .	90	. . .	12	365	
Engineers,	4	. .	1 20 & 1 00	. .	12	365	
Blacksmith,	1	. . .	1 25	. . .	10	26	Each month.
Carpenters,	2	. . .	1 00	. . .	10	26	Each month.
Laborers,	6	. . .	75	. . .	10	26	Each month.

REMARKS.—We have two stacks, the one was in operation during the entire time from January 1, 1878, to December 9, 1878, when it was blown out; the other, only in operation about four months this year.

KEYSTONE FURNACE COMPANY.

Clymer Iron Company.

Temple, Berks county.
Establishment located at Muhlenberg and Oley townships, Berks county.
Whole number of persons employed, about 50 men.
Amount of capital employed in business, $75,000.
Amount paid annually for wages of employés, $12,000.
Amount paid for materials used in business, $19,500.

Number of tons and value of annual products, 1,050 tons of cold blast charcoal iron; valued about $30,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	$2 00	...	...	325	We are carrying on an old-fashioned charcoal furnace. The furnace men work turns of twelve hours each. The other men from morning till night, as the season is, without reout regard to the hours.
Foundryman,	1	...	1 20	...	12	325	
Keeper,	1	...	80	...	12	325	
Fillers,	2	...	60	...	12	325	
Gutterman,	1	...	70	...	12	325	
Stockers,	2	...	60	...	12	325	
Cinderman,	1	...	70	...	12	325	
Blacksmith,	1	...	80	...	12	325	
Carpenter,	1	...	80	...	12	325	
Ore miners,	12	...	60	...	12	325	
Carters,	4	...	70	...	12	325	
Weighman,	1	...	70	...	12	325	
Colliers,	12	...	70	...	12	325	

REMARKS—We have two furnaces, one charcoal and one anthracite. The statistics which we here give relate to the charcoal furnace, which is called the Oley furnace, and is situated in Oley township, Berks county. Our anthracite furnace is in Muhlenberg township, Berks county, and has never been in blast. It was charged for a charcoal furnace in 1873, and never has had fire in it. The undertaking thus far has paid nothing, but rather a great loss.

WM. H. CLYMER,
President Clymer Iron Company.

BUCKS COUNTY.

Dunham Iron Works.

(Cooper & Hewitt,) Riegelsville, Bucks county; also, 17 Barling Slip, New York.

Establishment located in Bucks county.

Whole number of persons employed, 200.

Number of tons and value of annual products, 14,102 net tons pig iron; value about $200,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	...	...	...	38 weeks.	
Foundrymen,	2	...	$2 00	...	12		
Keepers,	2	...	1 45	...	12		
Keepers helpers,	4	...	1 20	...	12		
Fillers,	12	...	1 20	...	12		
Guttermen, cinder-driers, and dump,	4	...	1 15	...	12		
Stockers,	6	...	1 00	...	10		
Cindermen,	2	...	1 15	...	12		
Engineers,	5	...	1 40	...	12		
Firemen,	3	...	1 00	..	10		
Blacksmiths, (includes miners,)	7	...	*1 25	...	10		
Blacksmith's helpers,	3	...	95	...	10		
Carpenters,	5	...	*1 50	...	10		
Ore miners,	52	2	1 00	...	10		
Laborers,	79	8	90	...	10		
Weighman,	1	...	1 00	..	10		
Machinists,	4	...	*1 50	...	10		
Moulders,	3	...	*1 65	...	10		
Saddler,	1	...	1 25	...	10		
Farmers,	7	3	90	...	10		

* Average.

B. F. FACKENTHAL, JR.,
Superintendent.

BLAIR COUNTY.

Blair Iron and Coal Company.

Hollidaysburg, Blair county.

Establishment located in Bennington, Blair county.

Whole number of persons employed, 73.

Amount paid annually for wages of employés, $23,295 76.

Number of tons of annual products, 6,152 tons Bessemer.

BLAIR IRON AND COAL COMPANY.

Blair Iron and Coal Company.

Hollidaysburg, Blair county.

Establishment located in Frankstown, Blair county.

Whole number of persons employed, 46.

Amount paid annually for wages of employés, $17,433 48.

Number of tons of annual products, 8,082 tons mill and foundry.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$3 00	. . .	10 hours.	Whole year.	
Foreman,	1	. . .	2 00	. . .			
Keepers,	2	. . .	1 48	. . .			
Iron men,	2	. . .	1 30	. . .			
Fillers,	6	. . .	1 15	. . .			
Stockers,	4	. . .	90	. . .			
Cindermen,	2	. . .	1 15	. . .			
Engineers,	2	. . .	1 20	. . .			
Laborers,	20	. . .	90	. . .			
Weighmen,	. . .	6	. . .	$0 60			

BLAIR IRON AND COAL COMPANY

Blair Iron and Coal Company.—Furnace No. 1.

Hollidaysburg, Blair county.

Establishment located in Hollidaysburg, Blair county.

Whole number of persons employed, 60.

Amount paid annually for wages of employés, $21,425 88.

Number of tons of annual products, 6,391—bessemer.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$3 00	. . .	10	Two months out of blast.	
Foreman,	1	. . .	2 00	. . .	10		
Keepers,	2	. . .	1 48	. . .	10		
Ironmen	2	. . .	1 30	. . .	10		
Fillers,	6	. . .	1 15	. . .	10		
Stockers,	4	. . .	90	. . .	10		
Cindermen,	2	. . .	1 15	. . .	10		
Engineers,	2	. . .	1 20	. . .	10		
Blacksmith,	1	. . .	1 75	. . .	10		
Carpenter,	1	. . .	1 44	. . .	10		
Laborers,	34	4	90	$0 60	10		

BLAIR IRON AND COAL COMPANY.

Blair Iron and Coal Company.—Furnace No. 2.

Hollidaysburg, Blair county.

Establishment located in Hollidaysburg, Blair county.

Whole number of persons employed, 50.

Amount paid annually for wages of employés, $18,972 84.

Number of tons of annual products, 7,169—bessemer.

BLAIR IRON AND COAL COMPANY.

John Royer.

Royer, Blair county.

Establishment located in Blair county.

Whole number of persons employed, 115 men and boys.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $42,000.

Amount paid for materials used in business, $17,000.

Number of tons and value of annual products, 1,600 tons; $44,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foundryman,	1	...	$1 50	...	...	320	
Keepers,	2	..	1 00	...	12	320	
Fillers,	2	...	1 00	..	12	320	
Gutterman,	1	...	1 20	...	10	320	
Stocker,	1	...	1 00	...	10	320	
Blacksmith,	1	...	1 50	...	10	300	
Blacksmith, (helper,)	1	...	1 00	...	10	300	
Carpenter,	1	...	1 25	...	10	300	
Laborers,	10	...	90	...	10	250	
Colliers,	38	...	1 00	...	12	175	
Wood choppers,	50	10	...	...	...	...	30 to 35 cents per cord.

A. McALLISTER, *Manager.*

CAMBRIA COUNTY.

Cambria Iron Company.

Johnstown, Cambria county.

Establishment located in Johnstown, Cambria county.

Whole number of persons employed, 283.

Amount of capital employed in business: Included in total capital of Cambria Iron Company.

Amount paid annually for wages of employés, $102,000.

Amount paid for materials used in business, $1,017,289 68.

Number of tons and value of annual product, 65,900 gross tons; $1,449,800.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Foundrymen,	3	...	$2 50 to 3 00			Twelve months.	
Keepers,	10	...	1 37 to 2 00				
Keepers, helpers,	40	...	1 08				
Fillers,	40	...	1 31				
Cindermen,	40	...	1 08				
Engineers,	15	...	0 75 to 1 30				
Firemen,	15	...	1 00				
Blacksmiths,	3	...	1 50				
Blacksmiths, helpers,	3	...	90				
Carpenters,	2	...	1 18				
Laborers,	112	...	78				

CAMBRIA IRON COMPANY.
Powell Stackhouse, *A. G. M.*

CENTRE COUNTY.

Valentines & Co.

Bellefonte, Centre county.

Establishment located in Centre county.

Whole number of persons employed, 59 at furnace.

Amount of capital employed in business, $50,000: Working capital, real estate, $300,000.

Amount paid annually for wages of employés, $27,375.

Amount paid for materials used in business, 16,000 tons ore, $30,000 charcoal, limestone, sand, etc., $2,000.

Number of tons and value of annual products, 3,800 tons, or $95,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	2	. . .	$4 00	. . .	8	About 300 days.	
Foundryman,	1	. . .	3 00	. . .	10		
Keepers,	2	. . .	2 25	. . .	12		
Fillers,	2	. . .	2 00	. . .	12		
Gutterman,	1	. . .	3 00	. .	18		
Stockers,	4	. . .	1 75	. . .	12		
Cinderman,	1	. . .	2 25	. . .	10		
Engineers,	2	. . .	2 50	. . .	10		
Blacksmith,	1	. . .	2 25	. . .	10		
Blacksmith, helper,	1	. .	1 50	. . .	10		
Carpenter,	1	. . .	2 75	. . .	10		
Ore miners,	30	10	1 00	$0 60	10		
Laborers,	10	. . .	1 00	. . .	10		
Weighman,	1	. . .	2 00	. . .	8		

VALENTINES & CO.

Curtius & Co.

Roland, Centre county.

Establishment located in Centre county.

Whole number of persons employed, 125.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $48,000.

Amount paid for materials used in business, $12,000.

Number of tons and value of annual products, about 1,600 tons of bar iron; amount $96,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundryman,	1	. . .	$2 00	. . .	. . .	365	
Keepers,	2	. . .	1 30	. . .	12	365	
Fillers,	3	1	1 30	$0 50	12	365	
Guttermen,	1	1	1 30	. . .	24	365	
Stockers,	1	1	1 30	. . .	12	365	
Blacksmiths,	2	. . .	1 31	. . .	10	365	
Carpenter,	1	. . .	1 50	. . .	10	365	
Ore miners,	30	. . .	90	. . .	10	365	
Laborers,	95	. . .	1 25	. . .	10	365	

REMARKS.—We manufacture charcoal, bloom, bar, and rod iron.

CUMBERLAND COUNTY.

C. W. Ahl & Son.

Carlisle, Cumberland county.

Establishment located in Cumberland county.

Whole number of persons employed, 150.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $25,000.

Amount paid for materials used in business, $15,000.

Number of tons and value of annual products, 1,800 tons of pig iron; value, $45,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundryman,	1	One boy employed.	Furnace men, 90 cts. Laborers, . . 80 cts.		12 hours at furnace. 10 hours outside w'k	250	Forgemen, 11 in number, get $4 50 per ton. One half ton to each man is a day's work.
Keepers,	2						
Fillers,	2						
Guttermen,	2						
Stocker,	1						
Blacksmith,	1						
Blacksmith, (helper,)	1						
Carpenter,	1						
Ore miners,	15						
Laborers,	125						

DAUPHIN COUNTY.

Paxton Furnaces.

Harrisburg, Dauphin county.

Establishment located in Dauphin county.

Whole number of persons employed, 150.

Amount of capital employed in business, $350,000.

Amount paid annually for wages of employés, $37,835.

Amount paid for materials used in business, $151,000.

Number of tons of annual products, 14,026 gross tons of 2,240 pounds.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1					One furnace in during entire year. Other furnace in since October 1.	Mechanics and laborers work only nine hours during winter mos.
Founder,	1						
Keepers,	4	.	$1 55 and 1 45	. .	12		
Keepers, (helpers,)	4	. . .	1 30	. . .	12		
Fillers,	16	. . .	1 22	. . .	12		
Cindermen,	10	. . .	1 22	. . .	12		
Engineers,	4	. . .	1 50	. . .	12		
Machinist,	1	. . .	2 00	. .	10		
Blacksmiths,	4	. .	1 50 and 2 00	. .	10		
Blacksmiths, (helpers,)	2	. . .	1 10	. . .	10		
Carpenters,	3	. .	1 50 and 2 00	. .	10		
Ore miners,	25						
Laborers,	40	. . .	1 10	. . .	10		
Weighmen,	5	. . .	2 00				
Quarymen,	35	. . .	1 25	. . .	10		

McCORMICK & CO.

FRANKLIN COUNTY.

Hunter & Springer.

Chambersburg, Franklin county.

Establishment located in St. Thomas township, Franklin county.

Whole number of persons employed, about 75.

Amount of capital employed in business, invested in property and business, about $70,000.

Amount paid for material used in business—have mostly our own wood; ore costs us $4 00 per gross ton in bridge house; limestone costs, in stock house, 60 cents per ton.

Number of tons of annual product, annual product about 1,200 gross tons.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	$500*	...	At furnace, 12 hrs. Other work, 9 to 11 hours.	From 8 to 9 mos.	Among the hands employed we include choppers and colliers. This winter we cut very little wood, and will have less men employed. Furnace will not be in operation next summer.
Foundryman,	1	...	600*	...			
Keepers,	2	...	24†	...			
Fillers,	2	.	22†	...			
Gutterman,	1	...	22†	...			
Stocker,	1	...	22†	...			
Blacksmith,	1	...	24†	...			
Ore miners,	10	3	70c.	40c.			
Laborers,	3	...	70c.	...			

* Per year. † Per month.

HUNTER & SPRINGER.

R. M. Shalter.

Canich Furnace, Franklin county.

Establishment located in Metal township, Franklin county.

Whole number of persons employed, 25 men.

Amount of capital employed in business, $1,000.

Amount paid annually for wages of employés, $20 per day.

Amount paid for materials used in business, $5 00 per day.

Number of tons of annual products, 4 tons per day.

Employ 25 men and 2 boys. Wages of men, $2 00 per day; boys, $1 00 per day. Hours worked per day, 9. Days in operation during the year, 270.

Southern Pennsylvania Railway and Mining Company.

Chambersburg, Franklin county.

Establishment located in Franklin county.

REMARKS.—Height of stack, 35 feet; size of boshes, 9 feet; two tuyeres; hob blast; two boilers; one engine, (45-horse power); two blowing cylinders; use anthracite coal or coke; estimated capacity, 60 tons per week; gas from tunnel-head utilized for fuel in generating steam; furnace not in blast.

JOHN L. RITCHEY,
Secretary and Treasurer.

FAYETTE COUNTY.

Dunbar Furnace Company.

Dunbar, Fayette county.

Establishment located in Fayette county.

Whole number of persons employed, from 350 to 400. Varies from month to month.

Amount of capital employed in business, $500,000.

Amount paid annually for wages of employés, $200,000.

Amount paid for materials used in business: raw, $50,000; freight, $50,000.

Number of tons and value of annual products: 22,000 tons; about $330,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foundryman,	1	. . .	. . . .	. . .	. . .	. . .	$125 per mo.
Hot-blast men,	2						
Keepers,	2	. . .	$1 75	. . .	12	325 days each as average.	
Keepers (helpers,)	4	. . .	1 35	. . .	12		
Fillers,	3	. . .	1 90	. . .	12		
Guttermen,	8	. . .	$1 10 & 1 20	. . .	12		
Stockers,	8	. . .	1 25 & 1 35	. . .	12		
Cindermen,	4	. . .	1 20	. . .	12		
Engineers,	2	. . .	1 75	. . .	12		
Firemen,	2	. . .	1 15	. . .	12		
Brakemen,	2	. . .	1 30	. . .	12		
Blacksmiths,	2	. . .	1 30 & 1 40	. . .	12		
Blacksmiths, (helpers),	6	. . .	90 to 1 30	. . .	12		
Carpenters,	4	. . .	1 70 to 2 00	. . .	10		
Ore miners,	150	5					
Laborers,	104	3	95 to 1 20	$0 55	10		
Weighmen,	7	. . .	90 to 2 00	. .	10 and 12		
Coal miners,	35						
Book-keepers,	2	. . .	. . . .	. . .	. . .	. . .	$55 & $100 p. m.
Machinists,	2	. . .	1 20 & 2 30	. . .	10		
Moulders,	2						
Locomotive engineers,	4	. . .	1 60 & 1 75	. . .	10		
Locomotive firemen,	4	. . .	1 30	. . .	10		

REMARKS.—Make pig iron. Used Pittsburgh mills and foundries. No change in the establishment since last report. See report, 1876–77.

A. B. DeSANDES,
Superintendent and Vice President.

COLUMBIA COUNTY.

Bloomsburg Iron Company.

Bloomsburg, Columbia county.
Establishment located in Columbia county.
Whole number of persons employed, say 108.
Amount of capital employed in business, about $200,000.
Amount paid annually for wages of employés, about $36,400.
Amount paid for materials used in business, about $80,000.
Number of tons and value of annual product, 6,286 tons, gross; $92,718.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1				Eight to ten hours.	Three hundred and sixty-five.	
Foundryman,	1						
Keepers,	2			$9 00*			
Keeper, (helpers,)	2			6 30*			
Fillers,	6			6 30*			
Teamsters,	6						
Cindermen,	6						
Wheel house men,	2						
Mine boss,	1						
Blacksmith,	1			1 50			
Blacksmith, (helper,)	1						
Carpenter,	1			1 50			
Ore miners, about,	60						
Laborers,	9			0 85			
Weighmen,	2						
Weigh master,	1						
Carters,	2						
Clerks,	4						

* Per week.

Characteristics.—Two furnaces, one out of blast since November, 1873. One has been in blast constantly, and has as constantly lost money for its owners since 1873. Furnaces (built 1844) run by water power. Metal produced is nearly neutral in character, slightly inclined to cold short. Made entirely from fossil ores from our own mines in this section, and is considered, for many purposes, as good as any made in the State.

BLOOMSBURG IRON CO.,
By P. Drinker, *Treasurer.*

Wm. Neal & Sons.

Bloomsburg, Columbia county.

Establishment located in Columbia county.

Whole number of persons employed, including teamsters, 140.

Amount of capital employed in business, about $160,000.

Amount paid annually for wages of employés, including teams, about $32,000, at an average of 80 cents per day for employés, and teamsters $2 per day.

Amount paid for materials used in business: when running full during whole year, our coal, ore, and limestone at present prices will amount to about $88,000.

Number of tons and value of annual products: when in full operation during all the year, we produce over 8,000 gross tons iron, worth, on an average,(in foundry,) at present about $16 gross ton.

Foundryman, 1; keepers, 2; keeper's helpers, 2; fillers, 8; guttermen, stockers, 4; cindermen, 4; engineers, 2; firemen, 2; blacksmith, 1; blacksmith's helper, 1; carpenter, 1; ore miners, 80; laborers, 6; weighman, 1; boss miner, 1; stable man, 1; boys, 3; teamsters, 20.

Hours worked per day.—Furnace men, 12; laborers, 10; miners, about 8 hours.

Days in operation during the year.—Out for repairs this year 8 weeks; in operation about a trifle over 300 days.

Daily wages paid: Founder, $3; keepers and engineers, $1 28; helpers, fillers, iron and cinder men, and firemen, 85 cents; laborers, 75 cents; carpenters, $1 40; blacksmiths, $1; miners by the day, 68 cents; most, however, work by the ton, and make more; our work, all told, averages about 80 cents per day, and our teams, counting 2 horses, about $2 per day.

Owing to stoppage for repairs, &c., this year, our product will not, we think, reach quite 7,000 tons for 1878, and the consumption of material will be correspondingly reduced. Our labor, however, not much altered, as we kept all our men employed and miners in operation, and the teams employed most of the time during our stoppages for repairs, &c.

WM. NEAL & SONS.

HUNTINGDON COUNTY.

Rockhill Iron and Coal Company.

Orbisonia, Huntingdon county.

Establishment located in Huntingdon county.

Whole number of persons employed, 340.

Amount of capital employed in business: capital stock, $1,127,000; mortgage bonds, $500,000.

Amount paid annually for wages of employés and amount paid for materials used in business, $234,742 24.

Number of tons and value in dollars of annual products; $107,893\frac{11}{20}$ tons coal; $75,525 49. 10,421 tons pig-iron; $135,473.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1					Fifty-two weeks.	This report is based on the operations of one furnace. For eight weeks in the year two furnaces were in blast.
Foundryman,	1	. .	$3 33	. . .	12		
Keepers,	2	. . .	1 22½	. . .	12		
Keepers, (helpers,)	2	. . .	1 05	. . .	12		
Fillers,	1	1	1 05	$0 40	12		
Guttermen,	2	. . .	1 05				
Stockers, (bottom fillers,)	10	. .	1 05	. . .	12		
Cindermen,	4	. . .	1 05	. . .	12		
Engineers,	2	. . .	1 38	.	12		
Blacksmiths,	2	. .	1 71 and 1 42	. .	10		
Blacksmith, (helper,)	1	. . .	90	. . .	10		
Carpenters,	2	. .	1 60 and 1 30	. .	10		
Ore miners,	115						
Laborers,	6	1	85	60			
*Weighmen,	2						
*Coal miners,	149						
Laborers and others,	29	7	. . .	45			

* Contract.

A. W. SIMS, *Manager.*

LANCASTER COUNTY.

Chickies Iron Company.

Chickies, Lancaster county.

Establishment located in Chickies, Lancaster county.

Whole number of persons employed, 127.

Amount of capital employed in business, $150,000, not including real estate, which is rented.

Amount paid annually for wages of employés, $38,690.

Amount paid for materials used in business, $89,527, in addition to wages paid.

Number of tons, and value of annual products—8,625 gross tons, (2,240 pounds); value, $146,625. One furnace out of blast part of year for repairs.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year, average.	REMARKS.
Clerks,	1	. . .	$2 00				For first 6 months of year, the wages were about 10 cents per pay to each man higher than rates given here.
	1	. . .	1 00				
Foremen,	2	. . .	2 00	. . .	. . .	365	
Keepers,	4	. . .	1 20	. . .	12	365	
Keepers, (helpers,)	4	. . .	1 00	. . .	12	365	
Fillers,	14	. . .	90	. . .	12	365	
Guttermen,	2	. . .	1 00	. . .	12	365	
Quarrymen,	1	. . .	1 50	. . .	11	300	
	4	. . .	1 00				
Cindermen,	4	. . .	1 00	. . .	12	365	
Engineers,	4	. . .	1 00	. . .	12	365	
Stable bosses,	1	. . .	1 00	. . .	. . .	365	
	1	. . .	90				
Blacksmiths,	1	. . .	1 50	. . .	11	310	
	1	. . .	1 20				
Car conductors,	3	. . .	1 20	. . .	. . .	340	
Carpenter,	1	. . .	1 60	. .	11	310	
Laborers, (furnace,)	15	1	90	50	11	300	
Ore mines, viz:							
Bosses,	2	. . .	1 33	. . .	11	300	
	1	. . .	1 17				
Engineers,	1	. . .	90	. . .	11	300	
	1	. . .	1 10				
	1	. . .	80				
Miners,	53	3	70	65 55 50	11	300	

HORACE L. HALDEMAN.

Benson & Cottrell.

Columbia, Lancaster county.

Establishment located in Lancaster county.

Whole number of persons employed, 45.

Amount paid annually for wages of employés, average, $1,100.

Amount paid for materials used in business, $71,000.

Number of tons, and value of annual products—if running a full year, we make about 5,500 tons; value about $83,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$1 75	. . .	12	280	Furnace was in blast 280 days during 1878. Ore miners and laborers average about 20 days per month. Inside workmen make usually every day.
Foundryman,	1	. . .	1 75	. . .	12		
Keepers,	2	. . .	1 30	. . .	12		
Keepers, (helpers,)	2	. . .	1 10	. . .	12		
Fillers,	8	. . .	1 00	. . .	12		
Gutterman,	1	. . .	1 10	. . .	12		
Cindermen,	2	. . .	1 05	. . .	12		
Engineers,	2	. . .	1 10	. . .	12		
Blacksmith,	1	. . .	1 50	. . .	12		
Carpenter,	1	. . .	1 00	. . .	12		
Ore miners,	21	. . .	80	. . .	10		
Laborers, (at furnace,)	3	. . .	90	. . .	10		

BENSON & COTTRELL.

LAWRENCE COUNTY.

Crowther Iron Company.

New Castle, Lawrence county.

Establishment located in New Castle, Lawrence county.

Whole number of persons employed, 33.

Amount of capital employed in business, $100,000.

Number of tons annual products, 9,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	. . .	. . .	12	Six mos., Jan. to July, 1878.	Limestone delivered ready for use in stock house.
Foundryman,	1	. . .	. . .	. . .	12		
Keepers,	2	. . .	$1 60	. . .	12		
Keepers, (helpers,)	2	. . .	1 35	. . .	12		
Fillers,	10	. . .	1 35	. . .	12		
Hot blast men,	2	. . .	1 35	. . .	12		
Stockers,	3	. . .	*				
Cindermen,	3	. . .	*				
Engineers,	2	. . .	2 00	. . .	12		
Blacksmith,	1	. . .	2 00	. . .	12		
Laborers,	2	. . .	1 00	. . .	12		
Metal weighmen and loaders,	4	. . .	†	. . .	10		

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* Eighteen cents per gross ton.

† Nine cents per gross ton.

GEORGE B. BERGER, *Manager.*

Etna Iron Works, (Limited.)

New Castle, Lawrence county.

Establishment located in Lawrence county.

Whole number of persons employed, 47.

Amount of capital employed in business, $350,000.

Amount paid annually for wages of employés, $30,000.

Number of tons and value of annual products, 20,000 tons, at say $17, $340,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundryman, ...	1	. . .	$4 25	. .	12		
Keepers, ...	4	. . .	1 35	. . .	12		
Keepers, (helpers,) .	4	. . .	1 15	. . .	12		
Fillers, ...	14	. . .	1 15	. . .	12		
Stockers, ...	7	. . .	*	. . .	12		
Cindermen, ...	4	. . .	*	. . .	12		
Engineers, ...	2	. .	1 75	. . .	12		
Blacksmith, ...	1	. . .	2 00	. . .	12		
Carpenter, ...	1	. . .	1 30	. . .	12		
Laborers, ...	2	. . .	1 00	. . .	12		
Weighman, ...	1	. . .	1 00	. . .	12		
Metal carriers, ...	3	. . .	†	. . .	12		
Hot-blast men, ...	3	. . .	1 15	. . .	12		

*30 cents a ton iron made.

†10 cents per ton iron made.

REMARKS.—In stating capital employed, $350,000, it includes the mill portion of property, and when the company was organized, the two blast furnaces were valued at $250,000, and the mill at $100,000. The prices that are set opposite the names are the same that we are paying to-day, which is a slight reduction of prices paid the first part of the year 1878. In stating number of tons of annual product, the 20,000 tons stated, is about what we can make when both furnaces are in blast. In naming price, $17, I take about average price for the year 1878.

A. J. S. THOMPSON.
Secretary.

Neshannock Iron Company.

New Castle, Lawrence county.

Establishment located in Lawrence county.

Whole number of persons employed, 35.

Amount paid annually for wages of employés, $8,500.

Amount paid for materials used in business, $133,650.

Number of tons and value of annual products, 8,116 tons; value, no fixed value.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foundryman,	1	. . .	$3 00	. . . . .	.	147	
Keepers,	2	. . .	1 60	. . .	12	147	
Keepers, (helpers,)	2	. . .	1 35	. . .	12	147	
Fillers,	10	. . .	1 35	. . .	12	147	
Guttermen and hot blast	2	. . .	1 35	. . .	12	147	
Engineers,	2	. . .	2 00	. . .	12	147	
Blacksmith,	1	. . .	1 35	. . .	12	147	
Laborers,	12	. . .	1 10	. . .	10	147	

REMARKS.—This company suspended operation and payment in May Effected compromise with creditors in November, and will probably resume operations in the spring.

W. E. REIS, *Manager.*

LEBANON COUNTY.

Donaghmore Furnace.

Lebanon, Lebanon county.

Establishment located in Lebanon borough.

Whole number of persons employed, 28.

Number of tons of annual products, 6,000 tons.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	...	...	...	One year.	
Foundryman,	1	...	$1 66⅔	...	...		
Keepers,	2	...	1 50	...	...		
Keepers, (helpers,)	4	...	1 20	...	...		
Fillers,	6	...	1 20	...	...		
Guttermen,	2	...	1 25	...	...		
Engineers,	2	...	1 70 and 1 30	...	...		
Blacksmith,	1	...	1 25	...	...		
Carpenter,	1	...	1 00	...	...		
Laborers,	4	...	1 00	...	...		
Weighman,	1	...	*	...	...		

*10⅓ cents per ton iron weighed.

CHARACTERISTICS.—Anthracite furnace; boshes, 14 feet; height of stack, 44 feet; furnace in blast the whole year.

For R. W. COLEMAN'S HEIRS,
D. S. HAMMOND.

J. & R. Meily.

Lebanon, Lebanon county.

Establishment located in Lebanon county.

Whole number of persons employed: 26 persons employed at furnace.

Amount of capital employed in business, $120,000, including all investments.

Amount paid annually for wages of employés, about $12,200.

Amount paid for materials used in business, about $61,000.

Value of annual products, about $70,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foundryman,	1	...	$2 50	...	12	365	
Keepers,	2	...	1 35	...	12	365	
Keepers, (helpers,)	2	...	1 10		12	365	
Fillers,	6	...	1 00		12	365	
Guttermen,	2	...	1 20	...	12	365	
Stockers,	3	...	90	...	10	313	
Engineers,	2	...	1 20	...	12	365	
Blacksmith,	1	...	1 10	...	10	313	
Laborers,	3	...	90	...	10	313	
Weighman,	1	...	1 10	...	10	365	

J. & R. MEILY.

LEHIGH COUNTY.

Allentown Iron Company.

Allentown, Lehigh county.

Establishment located in Lehigh county.

Whole number of persons employed, 353.

Amount of capital employed in business, $1,000,000.

Amount paid annually for wages of employés, $60,258 58.

Amount paid for materials used in business, $621,524 51.

Number of tons and value of annual products, 44,282 tons.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager, ...	1	. . .					Number of men given is for five furnaces. No. 1 in operation 321 days. No. 2 in operation 212 days. No. 3 in operation 321 days. No. 4 in operation 365 days. No. 5 in operation 365 days.
Foundrymen, ...	4	. . .	$1 75	. . .	12		
Keepers, ...	10	. . .	1 15	. . .	12		
Keepers, (helpers,) . .	30	. . .	1 05	. . .	12		
Fillers, ...	40	. . .	1 05	. . .	12		
Stockers, ...	2	. . .	1 50	. . .	12		
Cindermen, ...	4	. . .	1 00	. . .	12		
Engineers, ...	7	. . .	1 25	. . .	12		
Blacksmiths, ...	2	. . .	1 30	. . .	12		
Blacksmiths, (helper,)	1	. . .	90	. . .	12		
Carpenters, ...	2	. . .	1 30	. . .	12		
Ore miners, about, . .	220	. . .	80	. . .	12		
Laborers, ...	15	. . .	90	. . .	12		
Loco. engineers, . . .	6	. . .	1 38	. . .	12		
Loco. brakemen, . . .	9	. . .	1 14	. . .	12		

SAMUEL R. LEWIS, *Superintendent.*

The Thomas Iron Company.

Hokendauqua, Lehigh county.

Establishment located in Lehigh county.

Whole number of persons employed, average about 200.

Amount of capital employed in business, $2,000,000.

Amount paid annually for wages of employés, $96,000 ; partly estimated.

Amount paid for materials used in business : Coal, ore, limestone, and sundries, $820,000 ; partly estimated.

Number of tons and value of annual products, 63,000 gross tons of pig iron ; value, $945,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	2			.			
Foundrymen,	3	...	$1 75 to 2 50	...	12		
Keepers,	10	...	1 62	...	12		
Keepers, (helpers,)	20	...	1 42 to 1 51	...	12		
Fillers,	40	...	1 42	...	12		
Brakemen,	6	...	85 to 1 25	...	10 to 12		
Taking out iron,	10	...	1 42	...	8		
Cindermen,	6	...	1 20 to 1 30	...	12		
Engineers, locomotive and stationary,	12	...	1 35 to 2 25	...	10 to 12		
Firemen, locomotive,	4	...	1 40	...	10		
Blacksmiths,	3	...	2 00	...	10		
Blacksmiths, (helpers)	3	...	1 00	...	10		
Carpenters,	7	...	1 10 to 1 50	...	10		
Laborers,	30	...	90	...	10		
Weighmen,	6	...	1 25	...	10		
Masons,	2	...	1 50	...	10		
Moulders,	3	...	1 25 to 1 75	...	10		
Machinists,	8	...	1 35 to 2 00	...	10		
Painters,	2	...	1 10	...	10		

JOHN THOMAS, *General Supt.,*
Per J. C. WALT.

Lehigh Valley Iron Company.

Coplay, Lehigh county.
Establishment located in Lehigh county.
Whole number of persons employed, 70.
Amount of capital employed in business, $600,000.
Amount paid annually for wages of employés, $23,201 54.
Amount paid for materials used in business, $232,569 28.
Number of tons of annual products, 16,902 tons pig iron.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	3			. . .	12 hours per day.	Whole year.	
Foundryman,	1	. . .	$1 90	. . .			
Keepers,	4	. . .	1 12½	. . .			
Keepers, (helpers,)	4	. . .	1 00	. . .			
Fillers,	12	. . .	1 00	. . .			
Guttermen,	8	. . .	1 00	. . .			
Stockers,	2	. . .	80	. . .			
Cindermen,	6	. . .	90	. . .			
Engineers,	9	. . .	1 15	. . .			
Firemen,	5	. . .	90	. . .			
Blacksmith,	1	. . .	1 30	. . .			
Blacksmith, (helper,)	1	. . .	80	. . .			
Carpenters,	2	. . .	1 52	. . .			
Laborers,	11	. . .	80	. . .			
Weighman,	1	. . .	1 00	. . .			

REMARKS.—This company is running but two stacks of the three owned by it. This statement covers only the workmen, materials, and production of the two stacks now in operation, and is but two thirds of our full capacity.

D. H. KLINE,
Assistant Superintendent.

Lehigh Iron Company.

Allentown, Lehigh county.

Establishment located in Lehigh county.

Whole number of persons employed, about 160.

Amount of capital employed in business, $250,000.

Amount paid annually for wages of employés, $18,746—furnaces.

Amount paid for materials used in business, $148,720—includes quarry labor and labor at mines.

Number of tons, and value of annual products, 9,950 gross tons; about $175,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundrymen, ...	2	. . .	$1 25	. . .	12	327	
Keepers, ...	2	. . .	1 00	. . .	12		
Keepers, (helpers,) . .	2	. . .	80	. . .	12		
Fillers, ...	8	. . .	80	. . .	12		
Guttermen, ...	4	. . .	80	. . .	12		
Cindermen, ...	2	. . .	80	. . .	12		
Engineers, ...	4	. . .	80	. . .	12		
Blacksmith, ...	1	. . .	1 20	. . .	10	240	
Carpenters, ...	2	. . .	1 00	. . .	10	240	
Ore miners, ...	100	. .	60	. . .	10	240	
Laborers, ...	4	2	70	40	10	240	
Weighmen, ...	4	. . .	5*	. . .	. . .	240	
Quarrymen, ...	20	. .	75	. . .	10	240	

* Per ton.

L. R. MEEGER,
Secretary.

Allentown Rolling-Mill Company.

Allentown, Lehigh county.

Establishment located in Lehigh county.

Whole number of persons employed, 42.

Amount of capital employed in business, $400,000.

Amount paid annually for wages of employés, $18,372.

Amount paid for materials used in business, $118,612 25, including the cost of a new hearth and bosh.

Number of tons annual products, 10,022 tons.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$3 33				
Foundryman,	1	. . .	2 00	. . .	12	365	
Keepers,	3	. . .	1 15	. . .	12	365	
Keepers, (helpers,)	2	. . .	1 00	. . .	12	365	
Fillers.	8	. . .	1 00	. . .	12	365	
Guttermen,	4	. . .	1 00	. . .	12	365	
Cindermen,	2	. . .	1 00	. . .	12	365	
Engineers,	3	. . .	1 10	. . .	12	365	
Blacksmith,	1	. . .	1 25	. . .	10	313	
Blacksmith, (helper,)	1	. . .	90	. . .	10	313	
Carpenters,	2	. . .	1 25	. . .	10	313	
Laborers,	12	. . .	80	. . .	10	313	
Weighmen,	1	. . .	1 50	. . .	8	313	
Clerk,	1	. . .	2 66	. . .	10	313	

CHARACTERISTICS.—Blast furnace. Making foundry and mill iron.

C. H. NIMSON, *Manager.*

LYCOMING COUNTY.

Red Run Coal Company.

Roaring Branch, Lycoming county.

Establishment located in Lycoming county.

CHARACTERISTICS OF ESTABLISHMENT.—The furnace owned by the Red Run Coal Company is near Roaring Branch, Pennsylvania. It has not been in operation since July, 1874. We have good bituminous coal that cokes freely, and an iron ore that smelts easily and makes a very tough, hard metal; both ore and coal are in abundance, and within a half a mile of the furnace. In the experiments heretofore made at this furnace neither of the materials on the property have been used for want of an inclined plane. This company leases and does not operate its mines or furnace. The furnace was erected to make iron from the ore and coal on the lands owned by the company, as on a neighboring tract, containing the same variety of ore, a charcoal furnace was successfully run from 1835 to 1850.

It is believed that an iron of extraordinary good quality could be made here, at present rates for labor, at about the following cost per ton:

Ore, per ton of iron,	$3 00
Coke, per ton of iron,	3 50
Limestone, per ton of iron,	1 50
Labor, per ton of iron,	4 00
	$12 00

The ore and coal are practically inexhaustible. The iron made at the charcoal furnace spoken of had an extraordinary reputation for toughness. Parties who bought it had to use great force in breaking the pigs, resting the ends on a support and striking them in the middle. They would then frequently bend an inch or more before breaking.

C. S. GREEN, *Secretary.*

MERCER COUNTY.

Westerman Iron Company.

Sharon, Mercer county.

Establishment located in Mercer county.

Whole number of persons employed, 34.

Amount of capital employed in business: Furnaces connected with rolling-mill.

Amount paid annually for wages of employés, $24,500.

Number of tons of annual products, $14,794\frac{1601}{2240}$.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundrymen,	2	. . .	$2 30	. . .	Twelve.	No. 1 furnace, 166. No. 2 furnace, 365.	This includes 2 horses and carts.
Keepers,	2	. . .	1 50	. . .			
Keepers, (helpers,)	2	. . .	1 30	. . .			
Fillers,	6	. . .	1 35	. . .			
Stockers,	7	. . .	1 40	. . .			
Cindermen,	2	. . .	2 25	. . .			
Engineers,	2	. . .	1 62½	. . .			
Fireman,	1	. . .	1 15	. . .			
Iron carriers,	2	. . .	1 25	. . .			
Roustabout,	1	. . .	1 12½	. . .			
Driver,	1	. . .	1 15	. . .			
Laborers,	2	. . .	1 00	. . .			
Weighman,	. .	1	. . .	$0 60			
Bricklayer,	1	. . .	1 50	. . .			
Watchman,	1	. . .	1 50	. . .			
Stock breaker,	1	. . .	1 25	. . .			

WESTERMAN IRON COMPANY,
per J. D. ADAMS.

Stewart Iron Company, Limited.

Sharon, Mercer county.

Establishment located in Mercer county.

Whole number of persons employed, average number for full time, 365 days, 45 men.

Amount of capital employed in business: original capital, $300,000. Owing to depreciation of values, new company organized with $150,000. Capital stock, all paid in, $150,000.

Amount paid annually for wages of employés, $25,570.

Amount paid for materials used in business, $238,114.

Number of tons and value of annual products, 15,412 gross tons pig iron; estimated value, average of sales, say $18 50 per gross ton, $285,112.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager and foundryman, ...	1	. . .	. . . .	. . .	24	355	
Keepers, ...	2	. . .	$1 35	. . .	12		
Keepers, (helpers,) .	4	. . .	1 15	. . .	12		
Fillers, ...	9	. . .	1 15	. . .	12		
Gutterman, ...	1	. . .	3 00	. . .	12		
Stocker, ...	1	. . .	1 15	. . .	12		
Engineers, ...	3	. . .	1 80	. . .	12		
Fireman and brakeman	1	. . .	1 75	. . .	10		
Blacksmith, ...	1	. . .	1 75	. .	10		
Carpenter, ...	1	. . .	1 80	. . .	10		
Laborers, ...	4	. . .	1 00	. . .	10		
Weighmen, ...	3	. . .	1 15	. . .	10		
Masons, ...	3	. .	1 at 2 75 2 at 2 25	. .	10		
Book-keepers, ...	5						

CHARACTERISTICS OF ESTABLISHMENT.—The Stewart Iron Company's property embraces about thirty acres of land, adjoining the borough of Sharon, Mercer county, Pennsylvania, on which is a plant consisting of one muck bar-mill, with sixteen puddling furnaces; one shingling hammer, and two setts of three high eighteen inch rolls; one blast furnace, thirteen feet bosh, fifty feet high; one blast furnace, fourteen feet bosh, fifty-five feet high. Capacity of each stack, from 325 to 425 gross tons of Bessemer pig iron per week. Large stock house and about one (1) mile of railroad tracks connected with the works.

One stack at a time only kept in blast during the past four years. Lake Superior ores used exclusively, and nineteen twentieths of the iron made used in making steel. Muck mill has been idle for three or four years, except about two months in the early part of this year, when, about 1,000 tons of hammered blooms were made, at an additional cost, of above value of the pig iron used, of about $13,000. These blooms were made for steel making.

STEWART IRON COMPANY, LIMITED,
By SAMUEL McCLUNE, *Manager.*

MIFFLIN COUNTY.

Glamorgan Company.

Lewistown, Mifflin county.

Establishment located in Lewistown borough.

Whole number of persons employed, 85.

Amount of capital employed in business, $300,000.

Amount paid annually for wages of employés, $34,500.

Amount paid for materials used in business, $116,000.

Number of tons and value of annual products, 10,000 tons pig metal, worth $150,000.

CLASSIFICATION.—Manager, 1; foundrymen, 2; keepers, 4; keepers, (helpers,) 4; fillers, 8; guttermen, 2; stockers, 4; cindermen, 4; engineers, 2; blacksmith, 1; blacksmith, (helper,) 1; carpenter, 1; ore miners, 40; laborers, 6; number of men, 75; number of boys, 5; daily wages paid men, 90 cents; daily wages paid boys, 50 cents; hours worked per day, 12; days in operation during year, 365.

WILLIAM WILLIS,
Superintendent Glamorgan Iron Company.

MONTGOMERY COUNTY.

Plymouth Furnaces.

Conshohocken, Montgomery county.

Establishment located in Montgomery county.

Whole number of persons employed, 70 men.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $24,000.

Amount paid for materials used in business, $216,000.

Number of tons and value of annual products, 18,000 tons, (2,000 lbs.,) $240,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$3 00	. . .	12	365	Buy all ore, and limestone, and coal.
Keepers,	4	. . .	1 14	. . .	12		
Keepers, (helpers),	4	. . .	1 05	. . .	12		
Fillers,	14	. . .	1 05	. . .	12		
Stockers,	4	. . .	80	. . .	12		
Cindermen,	4	. . .	1 05	. . .	12		
Engineers,	4	. . .	1 40	. . .	12		
Firemen,	4	. . .	80	. . .	10		
Blacksmith,	1	. . .	1 20	. . .	12		
Blacksmith, (helper,)	1	. . .	1 00	. . .	12		
Carpenter,	1	. . .	1 60	. . .	12		
Laborers,	27	. . .	80	. . .	10		
Weighman and clerk,	1	. . .	1 80	. . .	10		

CHARACTERISTICS OF ESTABLISHMENT.—Plymouth furnaces, Nos. 1 and 2—14 feet bosh; 55 feet high; anthracite coal; hematite and magnetic ore; production, foundry iron.

A large pipe foundry, (Plymouth foundry,) attached, with shops, &c. Formerly employed about 500 men. Has been idle since panic, 1874; no prospect of running until improvement in times.

Also a rolling-mill in Norristown, (Fulton rolling-mill,) formerly run by same firm. Idle since 1874. Formerly employed about 200 men and boys. No prospect of running at present.

PLYMOUTH FURNACES,
Per S. FULTON, *Agent.*

Warwick Iron Company.

Pottstown, Montgomery county.

Establishment located in Montgomery county.

Whole number of persons employed, 40 at furnace and 24 at mines.

Amount paid annually for wages of employés, $20,000.

Amount paid for materials used in business, $200,000.

Number of tons of annual products, 17,000 tons, (2,268 pounds.)

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Keepers, ...	2	. . .	$1 40	. . .	12	365	
Keepers, (helpers,) . .	4	. .	1 20 and 1 15	. .	12	365	
Fillers, ...	10	. .	1 20 and 1 15	. .	12	365	
Stockers, ...	7	. . .	1 00	. . .	12	365	
Cindermen, ...	6	. .	1 20 and 1 15	. .	12	365	
Engineers, ...	2	. .	2 00 and 1 40	. .	12	365	
Blacksmith, ...	1	. . .	1 50	. . .	10	300	
Blacksmith, (helper,) .	1	. . .	1 00	. . .	10	300	
Carpenters, ...	2	. .	1 50 and 1 30	. .	10	300	
Ore miners, ...	24	. . .	1 35	. . .	10	300	
Laborers, ...	5	. . .	1 00	. . .	10	300	
Night boss, ...	1	. . .	2 00	. . .	12	365	

WARWICK IRON COMPANY.

MONTOUR COUNTY.

Waterman & Company.

Danville, Montour county.

Establishment located in Montour county.

Whole number of persons employed, 73.

Amount paid annually for wages of employés, $12,004 96.

Amount paid for materials used in business, $72,222 46.

Number of tons, and value of annual products, 6,613 tons, $92,582.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foundryman,	1	. . .	$2 19	. . .	. . .	One furnace in blast 365 days.	
Keepers,	2	. . .	1 28	. . .	. . .		
Keepers, (helpers,)	2	. . .	85	. . .	. . .		
Fillers,	8	. . .	85	. . .	. . .		
Guttermen,	2	. . .	85	. . .	. . .		
Cindermen,	2	. . .	75	. . .	. . .		
Engineers,	3	. .	1 28	. . .	. . .		
Firemen,	2	. . .	85	. . .	. . .		
Blacksmith,	1	. . .	1 19	. . .	. . .		
Blacksmith, (helper,)	1	. . .	75	. . .	. . .		
Ore miners,	19	4	85	45	. . .		
Laborers,	20	2	75	65	. . .		
Weighman,	1	. . .	1 00	. . .	. . .		
Iron Hauler,	1	. . .	85	. . .	. . .		
Damper boys,	. .	2	. . .	43	. . .		

WATERMAN & COMPANY.

NORTHAMPTON COUNTY.

Glendon Iron Company.

Easton, Northampton county.

Establishment located in Northampton county.

Whole number of persons employed, 400.

Amount of capital employed in business, $1,500,000.

Amount paid annually for wages of employés, $195,660.

Amount paid for materials used in business, $744,800.

Number of tons and value in dollars of annual product, $62,624\frac{8}{20}$ tons; valued, $939,366.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1	...	...	...	10	365	
Foundrymen and assts.,	4	..		...	10	365	
Keepers,	10	...	$1 50	...	10	365	
Keepers, (helpers,)	10	...	1 25	...	...	365	
Fillers,	42	...	1 25	...	...	365	
Extra, carriers, weighers, &c.,	22	...	1 25	...	...	365	
Cindermen,	10	...	1 25	...	...	365	
Engineers,	4	...	1 50	...	...	365	
Tenders,	...	4	...	$0 75	...	365	
Blacksmiths,	5	...	1 80	...	...	365	
Blacksmiths, (helpers,)	4	...	1 25	...	...	365	
Carpenters,	6	...	2 00	...	...	365	
Ore miners,	40	...	...	...	...	365	
Laborers,	50	9	90	75	...	365	
Weighmen,	2	...	2 00	...	...	365	
Machinists, foundrymen, &c.,	40	...	1 80	...	...	365	
Quarrymen,	50	...	1 00	...	...	365	

GLENDON IRON CO.,
Per J. M. Bucon.

WESTMORELAND COUNTY.

Charlotte Furnace Company.

Scottdale, Westmoreland county.

Establishment located in Westmoreland county.

Whole number of persons employed, 155.

Amount of capital employed in business, $212,000.

Amount paid annually for wages of employés, $30,000.

Amount paid for materials used in business, $138,000.

Number of tons and value of annual product, 10,000 tons, 2,268 pounds pig iron; $160,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	4	. . .	$4 00				
Foundryman,	1	. . .	4 00				
Keepers,	2	. . .	2 00				
Keepers, (helpers,)	4	. . .	1 35				
Fillers,	10	. . .	1 35				
Guttermen,	2	. . .	1 15				
Stockers,	14	. . .	1 50	. . .	. . .	. . .	Charged to coke account.
Cindermen,	6	. . .	2 00				
Engineers,	3	. . .	1 90				
Fireman,	1	. . .	1 25				
Blacksmiths,	2	. . .	1 45				
Blacksmiths, (helpers,)	2	. . .	1 15				
Carpenter,	1	. . .	1 60				
Ore miners,	60	. . .	1 50	. . .	. . .	. . .	Charged to ore account.
Laborers,	21	. . .	1 00				
Weighmen,	2	. . .	2 80				
Quarrymen,	20	. . .	1 15	. . .	. . .	. . .	Charged to limestone.

CHARLOTTE FURNACE COMPANY.

UNION COUNTY.

Beaver, Marsh & Co.

Winfield, Union county.

Establishment located in Union county.

Whole number of persons employed, 100.

Amount of capital employed in business, $150,000.

Amount paid for materials used in business: for iron ore, $22,800; for coal, $19,125; lime, $1,600.

Number of tons and value of annual products: 3,800 tons; value, $57,600.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1					Eight months with furnace.	
Keepers,	2	...	$0 90	...	12		
Keepers, (helpers,)	2	...	80	...	12		
Fillers,	8	...	80	...	12		
Stockers,	3	4	80	$0 50	10		
Cindermen,	4	...	80	...	12		
Engineers,	2	...	85	...	12		
Blacksmith,	1	...	1 00	...	10		
Ore miners,	40	...	80	...	9		
Laborers,	6	...	80	...	10		
Weighman,	1						
Teamsters,	6	...	80	...	10		
Store and office,	3	...	80				
Lime quarries,	6	...	80				

LEVI ROOHE.

ROLLING-MILLS.

ALLEGHENY COUNTY.

Anchor Nail and Tack Works.

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, 350.
Amount paid annually for wages of employés, $210,000.
Number of tons produced, 10,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	-	From 50 cents to $1 35.	*	Part year—two thirds time.	* All day and night when wanted.
Foreman,	1	...	From $1 25 to $10.		*		
Heaters,	6	...			10		
Heaters, (helpers,)	6	...			10		
Puddlers,	40	...			10		
Puddlers, (helpers,)	40	...			10		
Rollers,	5	...			10		
Rollers, (helpers,)	20	...			10		
Buggymen,	6	...			10		
Engineers,	6	...			10		
Firemen,	3	...			10		
Blacksmiths,	3	...			10		
Blacksmiths, (helpers,)	2	...			10		
Machinists,	2	...			10		
Carpenter,	1	...			10		
Hookers,	5	...			10		
Catchers,	5	...			10		
Weighmen,	8	...			10		
Common laborers,	20	...			10		
Nailors,	31	...	$5 00 to 10 00		10		
Nailors, (feeders,)	114	.	1 50 to 3 00		10		
Tackers,	8	...	6 00 to 8 00		10		
Tackers, (helpers,)	15	...	50 to 1 00		10		
Packers, (Girls,)	15	...	1 50		8		
Teamsters,	7	...	1 50		10		

CHESS, SMYTH & CO.

H. Lloyd, Son & Co., (Kensington Iron Works.)

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, 125.
Amount of capital employed in business, $400,000.
Amount paid annually for wages of employés, $75,000.
Amount paid for materials used in business, $190,000.
Number of tons and value of annual product, 6,000 tons; equals, $300,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager, ...	1	. . .	$5 00	. . .	9	270	
Foreman, ...	1	. . .	3 00	. . .	10	270	
Heaters, ...	6	. . .	*65	. . .	9	270	
Heaters, (helpers,) .	4	3	2 25	$0 65	9	270	
Puddlers, . . .	14	. .	*5 00	. .	10½	270	Hot fix.
Puddlers, (helpers,) .	14	. .		. .	10½	270	
Rollers, . . .	4		*65	. .	9	270	General sizes—other sizes per card.
Rollers, (helpers,) . .	14	3		. .	9	270	
Stockers, . . .	2	. . .	1 50	. . .	8	270	
Engineers, ...	2	. . .	†4 50	. . .	9	270	
Fireman, ...	1	. . .	1 41⅔	. . .	9	270	
Blacksmith, ...	1	. . .	2 50	. . .	9	270	
Blacksmith, (helper,)	1	. . .	1 50	. .	9	270	
Machinist, ...	1	. . .	3 00	. . .	10	270	
Carpenter, ...	1	. . .	2 00	. . .	9	270	
Hookers, ...	2	. .	1 50	. . .	9	270	Sometimes four.
Catchers, ...	7	. . .	*41	. .	9	270	
Weighmen, ...	4	. . .	1 75	. . .	8	270	
Common laborers, . .	38	1	1 16⅔	83⅓	10	270	A number have set jobs not specified in list.

* Per ton.

† For two.

REMARKS.—Owing to depression in the iron business, we have not run to our full capacity for the past few years.

H. LLOYD, SON & CO.

Wayne Iron and Steel Works.

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, about 350.
Amount of capital employed in business, $500,000.
Amount paid annually for wages of employés, about $150,000.
Amount paid for materials used in business, about $300,000.

Number of tons and value of annual products, 10,000 tons; about $500,000.

Manager, 1; foremen, 3; heaters, 18; heaters, (helpers,) 18; puddlers, 56; puddlers, (helpers,) 56; rollers, 8; rollers, (helpers,) 8; stockers, 9; engineers, 3; firemen, 4; blacksmiths, 2; blacksmiths, (helpers,) 2; machinists, 3; carpenter, 1; hookers, 6; catchers, 8; weighmen, 10; laborers, 75 to 150; number of boys, 25 to 75. Hours worked per day, ten. Operation during the year, about ten months.

REMARKS.—We can only *approximate* estimates in our business. As far as our employés are concerned it is impossible to figure any closer than we have done, because we pay almost everything but daily labor (common) *by the ton* of production, and our men settle with their own helps. As to the common laborers, their number and amounts paid them are constantly varying.

CHARACTERISTICS OF ESTABLISHMENT.—Wayne Iron and Steel Works, established, 1828. Manufacture bar-iron, boiler plate, sheet-iron, and special shape work; also, steel, cast, German, puddler, and common, for general agricultural uses, in slab, bar, or special shapes.

BROWN & CO.

Pittsburgh Iron Works.

Pittsburgh, Allegheny county.

Establishment located in Thirty-fourth ward, Pittsburgh, Allegheny county.

Whole number of persons employed, 780.

Amount of capital employed in business, $1,500,000.

Amount paid annually for wages of employés, $400,000.

Amount paid for materials used in business, about $800,000.

Number of tons, and value of annual products, 27,400 net tons, $1,380,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1	. . .	$10 00	. . .	. . .	308	
Foremen,	3	. . .	3 00	. . .	. . .	308	
Heaters,	30	. . .	4 00	. . .	8	308	
Heaters, (helpers,)	30	. . .	1 35	. .	8	308	
Puddlers,	104	. . .	3 25	. . .	7	308	
Puddlers, (helpers,)	104	. . .	2 00	. .	7	308	
Rollers,	26	. . .	7 00	. . .	8	308	
Rollers, (helpers,)	. . .	. . .	. . . .	. . .	. . .	. . .	Are included with hookers and catchers.
Stockers,	6	. . .	1 35	. . .	10	308	
Buggymen,	. . .	. . .	. . . .	. . .	. . .	. . .	Each puddler his own buggyman.
Engineers,	9	. .	1 50	. .	10	308	
Firemen,	16	. . .	1 30	. . .	10	308	
Blacksmiths,	3	. . .	1 30	. . .	10	308	
Blacksmiths, (helpers,)	3	. .	1 30	. .	10	308	
Machinists,	4	.	2 00	. .	10	308	
Carpenters,	3	. .	1 25 to 1 75	. .	10	308	
Hookers,	8	.	1 25		8	308	
Catchers,	52	65	2 25	1 00	8	308	
Weighmen,	5	. . .	1 25	. .	10	308	
Common laborers,	154	. .	1 00	. . .	10	308	
Bundlers and shearmen,	82	. . .	1 25	. . .	8	308	
Drivers and watchmen,	26	. . .	1 60	. . .	10	308	
Ash and scrap wheelers,	20	. . .	1 05	. . .	10	308	

Characteristics of Establishment.—The Pittsburgh Iron Works contain, 52 single puddling furnaces; 17 heating furnaces; 2 18-inch trains rolls; 1 16-inch trains roll; 1 12-inch trains roll; 3 10-inch trains rolls; 6 8-inch trains rolls; and all other machinery and equipments necessary to puddle 100 tons of pig iron per day, and work the same into finished iron. All buildings are of iron, and are consequently fire-proof. Tenements for all workmen are owned by the firm, and immediately adjoin works. Exclusive products are, hoop iron, for oil, whisky, and other barrels, pails, tubs, or kegs; cotton ties; band iron, for locks, hinges, and general purposes.

J. PAINTER & SONS.

W. D. Wood & Co.

Pittsburgh, Allegheny county.
Establishment located in McKeesport, Allegheny county.
Whole number of persons employed, about 250.

Amount of capital employed in business, $375,000.
Amount paid annually for wages of employés, $125,000.
Number of tons and value of annual product, 4,000 tons; value, $475,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foreman,	4	. .	$4 00	. . .	12	300	
Heaters,	14	. . .	5 00	. . .	10	300	
Heaters, (helpers,)	4	.	2 00	. . .	10	300	
Puddlers & knobblers,	24	. .	5 00	. . .	7	210	
Puddlers, (helpers,)	24	. . .	2 00	. . .	7	210	
Rollers,	12	. . .	5 00	. . .	10	300	
Rollers, (helpers,)	2	. . .	2 00	. .	10	300	
Stockers,	6	. . .	1 35	. . .	9	300	
Hammermen,	2	. . .	5 00	. . .	9	300	
Engineers,	6	. . .	2 25	. . .	12	300	
Firemen,	4	. . .	1 50	. . .	12	300	
Blacksmiths,	2	. . .	2 25	. . .	10	300	
Blacksmith, (helper,)	1	. . .	1 50	. . .	10	300	
Machinists,	3	. . .	1 80	. . .	10	310	
Carpenter,	1	. .	1 75	. . .	10	300	
Hookers,	2	. . .	1 30	. . .	10	300	
Catchers,	2	. . .	2 75	. . .	10	300	
Weighman,	1	. . .	1 50		10	300	
Common laborers,	120	10	1 25	$0 75	10	300	
Runout men,	2	. .	5 00	. . .	. . .	200	
Helpers,	2	. . .	2 00	. . .	. . .	200	

CHARACTERISTICS.—Our product consists of about 1,300 tons of planished sheet iron, 2,700 tons of common, charcoal, and Juniata black sheet and plate iron. Have run our sheet and bar mills full time, double handed, the entire year. Puddlers off on a strike for three months. As all our skilled labor is paid by the ton, we have to give average per day.

W. D. WOOD & CO.

William Clark & Co.

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, about 250.
Amount of capital employed in business, $300,000.
Amount paid annually for wages of employés, $162,000.
Amount paid for materials used in business, $124,000.
Number of tons and value of annual products: 8,000 tons; $412,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foremen,	2						
Heaters,	9	. .	$5 00 to 7 00				
Heaters, (helpers,)	9	. . .	1 50				
Puddlers,	38	. . .	5 00				
Puddlers, (helpers,)	38						
Rollers,	9	. .	7 00 to 10 00				
Rollers, (helpers,)	80	15	1 50	$0 80			
Stockers,	6	. . .	1 42				
Buggymen,	2						
Engineers,	3	. . .	2 50				
Firemen,	4	. .	1 60				
Blacksmith,	1	. . .	3 00				
Blacksmiths, (helpers,)	2	. . .	1 50				
Machinists, (roll turners,)	3	. . .	3 50				
Carpenters,	2	. . .	2 00				
Hookers, (Shearmen,)	8	. . .	1 50				
Weighman,	1	. . .	1 25				
Common laborers,	23	3	1 15	80	10	300	
Bricklayers,	2	. . .	2 50				

WILLIAM CLARK & CO.,
SMITH.

Everson, Macrum & Co.

Pittsburgh, Allegheny county.

Establishment located in Pittsburgh, Allegheny county.

Whole number of persons employed, 150 to 225.

Amount of capital employed in business, $400,000 to $500,000, in connection with other operations.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager, ...	1						
Heaters, ...	9	. . .	$3 00 to 4 00	. . .	8 to 10		
Heaters, (helpers,) . .	4	2	40 to 1 60	. . .	8 to 10		
Puddlers, ...	13	. .	5 00 to 6 00	. .	8 to 10		
Puddlers, (helpers,) .	13	. .		. .	8 to 10		
Rollers, ...	7	. . .	4 00 to 7 00	. . .	8 to 10		
Rollers, (helpers,) . .	6	. . .	2 00 to 2 50	. . .	8 to 10		
Stockers, ...	8	. . .	1 20 to 1 50	. . .	10		
	4	. . .	1 20	. . .	10		
Buggymen, ...	2	. . .	1 35	. . .	10		
Engineers, ...	3	. . .	1 50 to 3 00	. . .	8 to 10		
Blacksmith, ...	1	. . .	2 50	. . .	10		
Blacksmith, (helper,)	1	. . .	1 20	. . .	10		
Hookers, ...	3	. . .	1 30 to 1 50	. . .	10		
Catchers, ...	6	. . .	2 00 to 2 50	. . .	8 to 10		
Weighmen, ...	7	. . .	1 20 to 1 75	. .	10		
Common laborers, . .	5	4	1 20	$0 80	10		

EVERSON, MACRUM & CO.

Pittsburgh Forge and Iron Company.

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, 152.
Amount of capital employed in business, $200,000.
Amount paid annually for wages of employés, $100,000.
Amount paid for materials used in business, $220,000.
Number of tons and value of annual product, 8,000; $315,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	.	. . .	10	290	
Foreman,	1	. . .	$3 20				
Heaters,	6						Heaters work by the ton; make about $5 20 per day. Puddlers work by the ton; make about $3 00 per ton. Helpers make about $2 00 per day. Rollers work by the ton; make about $7 00 per day. Helpers make about $3 00 per day; they work by the ton.
Heaters, (helpers,)	2	. . .	2 75				
Puddlers,	30						
Puddlers, (helpers,)	30						
Rollers,	4						
Rollers, (helpers,)	8						
Stockers,	2	. .	1 45 2 15				
Engineers,	2	. .	3 00 2 00				
Firemen,	2	. .	1 55 1 70				
Blacksmiths,	2	. .	2 50 1 70				
Blacksmiths, (helpers,)	2	. . .	1 35				
Machinist,	1	. .	2 25				
Carpenters,	2	. .	1 87 1 75				
Hooker,	1	. . .	1 60				
Catchers,	6						Catchers work by the ton; make about $3 00 per day.
Weighmen,	2	.	1 30 2 62½				
Common laborers,	27	. . .	1 12½				
Boys,	. . .	5	. . .	$0 60			
Millwright,	1	. . .	3 20				
Roll turner,	1						Turner works by the piece; makes about $3 00 per day.
Laboring boss,	1	. . .	1 50				
Watchman,	1	. . .	2 25				
Cinder wheeler,	1	. .	2 50				
Ash wheeler,	1	. . .	2 25				
Straighteners,	2	. . .	1 75				
Drag downs,	1	. .	1 60				
Piler and chargers,	2	. .	1 80 and 1 60				
Shearsmen,	4	1 2 1	3 85 1 50 1 70	each.			
Shearsman, (helper,)	1	. . .	1 35				

PITTSBURGH FORGE & IRON CO.,
J. K. VERNER, *Secretary.*

Lindsay & McCutcheon.

Pittsburgh, Allegheny county.
Establishment located in Allegheny City.
Whole number of persons employed, 145.
Amount of capital employed in business, $400,000.
Amount paid annually for wages of employés, $83,980.

Amount paid for materials used in business, $254,978 28.

Number of tons, and value of annual product, 6,178 tons, $352,720.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	$5 00	...	10	...	Full time.
Foreman,	1	...	3 60	...	10	...	Full time.
Heaters,	7	...	*65	...	...	240	
Heaters, (helpers,)	7	...	1 75	...	...	240	Work for heaters.
Puddlers,	20	...	*5 00	...	...	240	
Puddlers, (helpers,)	20	...	...	...	...	...	Paid by puddler.
Rollers,	7	...	*2 50 to 7 00	...	...	200	
Rollers, (helpers,)	...	...	...	...	...	200	Paid by rollers.
Stockers,	3	...	2 00	...	9	200	
Buggymen,	2	...	1 75	...	8	200	
Engineers,	2	...	3 00	...	10	240	
Firemen,	4	...	2 00	...	10	240	
Blacksmiths,	2	...	2 50	...	10	240	
Blacksmiths, (helpers,)	2	...	1 50	...	10	240	
Machinist,	1	...	2 50	...	10	240	
Carpenter,	1	...	1 50	...	10	240	
Weighmen,	4	...	1 75	...	10	200	
Bricklayer,	1	...	3 50	...	...	200	Work by contract.
Scrap heaters,	2	...	*2 50	...	...		
Scrap heaters—helpers,	3	...	...	...	...	...	Heater pays helper.
Watchers,	3	...	1 67	...	10	...	Full time.
Shearmen,	4	...	1 70	...	8	240	
Shearmen, (helpers,)	8	...	1 25	...	8	240	
Ash wheelers,	4	...	1 00	...	9	240	
Ore wheelers,	2	...	1 00	...	9	240	
Bricklayers, (helpers,)	2	...	1 25	...	9	240	
Coal shovelers,	6	...	1 75	...	10	240	
Driver,	1	...	1 25	...	10	240	
Laborers,	5	...	1 00	...	10	240	
Bundlers,	20	...	1 60	...	8	240	

* Per ton.

CHARACTERISTICS OF ESTABLISHMENT.—Manufacture hoop and band iron.

LINDSAY & McCUTCHEON.

Zug & Co.

Pittsburgh, Allegheny county.

Establishment located in Allegheny county.

Whole number of persons employed, 300.

Amount of capital employed in business, $250,000.

Amount paid annually for wages of employés, $143,000.

Amount paid for materials used in business, $250,000.

Number of tons and value of annual products, 12,000 tons; value, $410,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Managers,	2	. . .	$12 33	. . .	. . .	365	
Foreman,	1	. . .	2 77	. . .	. . .	365	
Heaters,	8	8	5 50	$0 35	11	255	
Puddlers,	46	. . .	5 00	. . .	11	252	Five dollars per ton, (2,240 lbs.)
Puddlers, (helpers,)	46	. . .	2 00	. . .	11	252	
Rollers,	5	. . .	7 00	. . .	11	255	
Rollers, (helpers,)	11	. . .	2 75	. . .	11	255	
Stockers,	3	. . .	1 66	. . .	11	252	
Engineers,	3	. . .	2 83	. . .	11	252	
Firemen,	2	. . .	1 75	. . .	11	252	
Blacksmith,	1	. . .	5 00	. . .	11	252	
Blacksmith, (helpers,)	3	. . .	1 00	. . .	11	252	
Carpenter,	1	. . .	1 50	. . .	11	252	
Hookers,	4	. . .	1 25	. . .	11	252	
Catchers,	5	. . .	2 75	. . .	11	252	
Weighmen,	4	. . .	1 66	. . .	11	252	
Common laborers,	24	. . .	1 25	. . .	11	252	
Nailers,	19	. . .	5 00	. . .	11	93	
Nailers, (feeders,)	55	. . .	2 00	. . .	11	93	
Nailers, (tenders,)	4	. . .	1 80	. . .	11	93	
Nailers, (packers,)	2	4	3 00	50	11	93	
Watchmen,	5	. . .	1 46	. . .	11	365	
Millwrights,	2	. . .	2 87	. . .	11	255	
Bricklayer,	1	. . .	3 00	. . .	11	255	
Shearman and helpers,	9	. . .	1 48	. . .	11	255	
Pilers, chargers, draydowns, and straightners,	17	. . .	1 50	. . .	11	252	

Characteristics of Establishment.—Our establishment manufactures merchant iron, agricultural implement iron, and nails.

ZUG & CO.

ARMSTRONG COUNTY.

Laufman & Co.

Apollo, Armstrong county.

Establishment located in Armstrong county.

Whole number of persons employed, 200.

Amount paid annually for wages of employés, $90,000.

Amount paid for materials used in business, about $90,000.

Number of tons and value of annual products: 2,500 tons sheet-iron; value, $290,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager, ...	1	6	. . .	$1 00	11	300	
Heaters, ...	11	. .	$1 75				
Heaters, (helpers,) .	4	. . .	1 50				
Puddlers and helpers,	22						
Rollers, ...	7						
Rollers, (helpers,) . .	28						
Stockers, ...	7						
Engineers, ...	4						
Firemen, ...	2	. . .	1 75				
Blacksmiths, ...	2	. . .	3 00				
Blacksmiths, (helpers,)	2	. . .	1 50				
Carpenters, ...	2	. . .	1 50				
Hookers, ...	2	. . .	2 00				
Catchers, ...	2	. . .	1 50				
Weighman, ...	1	. . .	1 25				
Common laborers, . .	20	. . .	1 10				
Coal diggers, ...	30	. . .					

REMARKS.—It is impossible to give exact amount paid daily to our men, as most of them work by the ton. We pay monthly.

Our product is fine sheet-iron, for making pans, elbows, coal hods, trunks, show cards, shovels, tin plate, tea trays, and stamped ware.

We are located forty miles from Pittsburgh, on the line of the West Pennsylvania railroad.

LAUFMAN & CO.

Kirkpatrick, Beale & Co.

Leechburg, Armstrong county.

Establishment located in Armstrong county.

Whole number of persons employed, 120.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $76,778 47.

Amount paid for materials used in business, $97,147 49.

Number of tons and value of annual product: 2,350 tons; value, $210,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$5 00	. . . .	. . . .	300	
Foreman,	1	. . .	5 00				
Heaters,	11	. . .	5 50				
Heaters, (helpers,)	7	. . .	2 00				
Puddlers,	14	. . .	3 55				
Puddlers, (helpers,)	12	. . .	2 00				
Rollers,	6	. . .	6 00				
Rollers, (helpers,)	4	. . .	2 00				
Stockers,	3	. . .	1 50				
Shearmen,	4	. . .	5 25				
Engineers,	5	. . .	1 50				
Openers,	3	. . .	2 00				
Blacksmith,	1	. . .	2 50				
Blacksmith, (helper,)	1	. . .	1 50				
Machinist,	1	. . .	3 00				
Carpenter,	1	. . .	2 00				
Hookers,	2	. . .	1 75				
Catchers,	6	. . .	1 75				
Weighmen,	7	. . .	2 00				
Common laborers,	4	. . .	1 00				
Scrap boys,	. . .	2	. .	$0 75			
Annealers,	2	. . .	2 00				
Cold rollers,	4	. . .	1 75				
Bricklayers,	1	. . .	3 00				
Teamsters,	4	. . .	2 00				
Coal miners,	6	. . .	2 00				
Employed in tin fact'y,	12	. .	2 00				

REMARKS.—We manufacture stamping iron, for deep and shallow stamping purposes; charcoal terne plates, refined, cold-rolled, charcoal, pan and elbow, Juniata, lock, trunk, tagger, show-card, tea-tray, shovel, and all other kinds of fine, smooth rolled sheet-iron, cut to size. Equal to any imported.

Our works are run entirely with natural gas, being the first works ever known to use it for fuel in the manufacture of iron. We are using it in all our furnaces, saving thereby about 1,800 bushels of coal per day, and find it superior to any other fuel, in every respect.

KIRKPATRICK, BEALE & CO.

BERKS COUNTY.

Philadelphia and Reading Coal and Iron Company.

Reading, Berks county.
Establishment located in Berks county.
Whole number of persons employed, 300.

Amount of capital employed in business, $750,000.

Amount paid annually for wages of employés, $138,000.

Amount paid for materials used in business, $623,290.

Number of tons and value of annual product, 22,846 tons (2,240 lbs.) rails and splice plates; $820,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$3 83	. . .	10	300	
Foreman,	2	. . .	2 80	. . .	10		
Heaters,	20	. . .	2 68	. . .	12		
Heaters, (helpers,)	22	. . .	1 50	. .	12		
Puddlers,	24	. . .	2 00	. . .	11¾		
Puddlers, (helpers,)	24	. . .	1 25	. . .	11¾		
Rollers,	6	. . .	3 36	. . .	11½		
Rollers, (helpers,)	2	. . .	1 37	. .	11½		
Stockers,	13	. . .	1 51	. . .	10		
Buggymen,	6	7	2 34	95	11½		
Engineers,	8	. . .	2 00	. . .	12		
Blacksmiths,	2	. . .	1 62	. .	9		
Blacksmiths, (helpers,)	3	. . .	1 05	. . .	9		
Machinists,	2	. . .	1 66	. . .	9		
Carpenter,	1	. . .	1 62	. . .	9		
Hookers,	14	. . .	1 89	. . .	11½		
Catchers,	6	. . .	2 46	. . .	11½		
Weighmen,	5	. . .	1 81	. . .	10.5		
Common laborers,	12	. . .	90	. . .	9		
Carters,	4	. . .	1 25	. . .	10		
Carter helpers,	4	. . .	1 10	. . .	10		
Roll turner,	1	. . .	2 70	. . .	9		

CHARACTERISTICS OF ESTABLISHMENT.—The mill was built in 1868. It has 12 single puddling furnaces, 10 heating furnaces, and 4 trains of rolls, one 12 inch and three 23 inch. Product, iron and steel rails and splice bars; annual capacity, 25,000 net tons. Specialty, reheated iron rails. Brand, "P & R."

H. E. C. COXE, *Superintendent.*

William McIlvain & Sons.

Reading, Berks county.

Establishment located in Reading, Berks county.

Whole number of persons employed, 44.

Amount of capital employed in business, $80,000.

Amount paid annually for wages of employés, $17,993 05.

Amount paid for materials used in business, $69,673 05, not including anything for interest on capital invested.

Number of tons, and value of annual products, 1,560 tons, (2,000 pounds,) $87,938 25.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS:
Superintendent,	1	. . .	$3 30	. . .	. . .	. . .	Full time.
Foreman,	1	. . .	2 82	. . .	Mill men average about 13 hours.	Mill men made about 244 days.	
Heaters,	2	. . .	2 70	. . .			
Heaters, (helpers,)	2	. . .	1 20	. . .			
Puddlers,	4	. . .	2 19	. . .			
Puddlers, (helpers,)	4	. . .	1 09	. . .			
Rollers,	2	. . .	1 50	. . .			
Rollers, (catchers,)	2	. . .	1 11	. . .			
Straighteners,	2	. . .	1 11	. . .			
Pilers,	2	. . .	1 11	. . .			
Levermen,	2	. . .	1 11	. . .			
Engineers,	2	. . .	1 40	. . .			
Blacksmith,	1	. . .	1 60	. . .			
Blacksmith, (helper,)	1	. . .	1 05	. . .			
Bricklayer,	1	. . .	2 00	. . .			
Carpenter,	1	. . .	1 50	. . .			
Marking off iron,	1	. . .	1 11	. . .			
Catchers, at pud-mill,	2	. . .	1 15	. . .			
Roller, at pud-mill,	1	. . .	1 50	. . .			
Weighman,	1	. . .	1 37½	. . .			
Common laborers,	3	. . .	1 05	. . .			
Teamsters,	3	. . .	1 05	. . .			
Shingling pud-balls,	1	. . .	1 69	. . .			
Stocker,	1	. . .	1 15	. . .			
Book-keeper,	1	. . .	1 78	. . .	. . .	. . .	Full time.

CHARACTERISTICS OF ESTABLISHMENT.—The product embraces, flange plate for locomotive and marine boilers, (tests lately made by competent experts, show a contraction of area of 43 per cent. before breaking, and a tensile strain of 64,056 pounds per square inch, indicating great softness, toughness, and homogeneousness,) together with the several grades used for plain cylinder or flue boilers, and also tank, stack, bridge, boat, flue, and pipe iron, fire and burglar proof safe iron, and coal chute iron of all the different wire gauges. The charcoal blooms entering into the manufacture of iron for boilers, are made under our own direction and management, at our Cove Forge, near Duncannon, Pennsylvania, and for our exclusive use, insuring the utmost uniformity in the product for boiler purposes. Full capacity of the mill about 4,000 tons per annum.

WILLIAM McILVAIN & SONS.

Joseph L. Bailey & Co.

Pine Iron Works, Berks county.
Establishment located in Berks county.

Whole number of persons employed, average 40.

Amount of capital employed in business, about $35,000.

Amount paid annually for wages of employés, $18,000.

Amount paid for materials used in business, about $104,000.

Number of tons, and value of annual products, 1,800 tons; value about $120,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$7 00	. . .	12	. . .	Two thirds time.
Foremen,	2	. . .	5 00	. . .	12	. . .	Two thirds time.
Heaters,	2	. . .	3 50	. . .	12	. . .	Two thirds time.
Heaters, (helpers,)	4	. . .	2 25	. . .	12	. . .	One half time.
Rollers,	3	. . .	3 00	. . .	12	. . .	Three fourths time.
Blacksmith,	1	. . .	1 80	. . .	10	. . .	Full year.
Blacksmith, (helper,)	1	. . .	1 40	. . .	10	. . .	One fourth time.
Catchers,	4	. . .	2 25	. . .	. . .	. . .	One half time.
Weighmen,	4	. . .	2 25	. . .	. . .	. . .	One half time.
Levermen,	4	. . .	2 25	. . .	12	. . .	One half time.
Straighteners,	4	. . .	2 25	. . .	12	. . .	One half time.
Teamsters,	2	. . .	1 50	. . .	10	365	
Floormen,	8	. . .	1 40	. . .	12	. . .	Two thirds time.

REMARKS.—It is impossible to give an accurate report of "days in operation," owing to some men working nearly every day, others, at the same job, only half time, &c.

JOSEPH L. BAILEY & CO.

Reading Bolt and Nut Works.

Reading, Berks county.

Establishment located in Reading, Berks county.

Whole number of persons employed, 85.

Amount of capital employed in businsss, $125,000.

Amount paid annually for wages of employés, $25,000.

Amount paid for materials used in business, $80,000.

Number of tons and value of annual products, 1,300 tons.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1					Every working day.	All men are paid by piece-work and not by the day, except such as are designated.
Foreman,	1						
Heaters,	2						
Heaters, (helpers,)	2						
Roller,	1						
Roller, (helpers,)	4						
Stockers,	2						
Engineer,	1	...	$1 40	...	10		
Blacksmiths,	2	...	1 60	...	10		
Blacksmith, (helpers,)	2	...	1 00	...	10		
Machinists,	15	...	1 50	...	10		
Carpenters,	3	...	1 40	...	10		
Hookers,	5						
Catcher,	1						
Common laborers,	*43	...	1 00	$0 60	10		

* Men and boys, laboring and at work in bolt and nut department.

Characteristics of Establishment.—This establishment is known as Reading Bolt and Nut Works, and class of goods manufactured embraces hot pressed nuts, machine bolts, bolt ends, lag screws, washers, turnbuckles, track bolts, and boiler rivets. The entire product of the rolling-mill is used in the manufacture of the above named articles, and, but little bar iron is offered for sale at any time.

J. H. STERNBERGH,
Lord.

BEDFORD COUNTY.

Kemble Coal and Iron Company.

Riddlesburg, Bedford county.

Establishment located in Bedford county.

Whole number of persons employed, 256.

Amount paid annually for wages of employés, $91,409 71.

Number of tons and value of annual product: 11,724 tons pig iron; 27,655 tons iron ore; 18,622 tons coal; 8,441 tons limestone.

Employés: Superintendent, 1; founder, 1; clerks, 2, $50 and $35; mine superintendent, 1, $3; blacksmiths, 2, $1 55; carpenters, 4, $1 25; oiler, 1, 90 cents; iron budgers, 2, $1 80; chief engineer, 1, $2; engineers, 3, $1 45; firemen, 3, $1 08, and boys, 2, 45 cents; stable boss, 1, $1; scrapper, 1, 90 cents; watchman, 1, 90 cents; mason, 1, $1 25; keepers, 2, $1 45; helpers, 2, $1 15; guttermen, 2, $1 00; cinder men, 4, $1; bottom fillers, 6, $1 10; top fillers, 4, $1 15; coke fillers, 6, 98 cents; coke foreman, 1, $1 25; cokers, 8, $1 25; chargers, 3, 90 cents; carting, 1, 90 cents; foreman coal washer, 1, $1 45; laborers coal washers, 3, 98 cents; unloading, 4, 95 cents; loaders, 6, 90 cents; sorting stock, 3, 90 cents.

Hours worked per day, 12; days employed during year, 365.

COAL MINES—MOUNT EQUITY.

Employés: Foreman miner, 1, $2; weighmaster, 1, $1 50; drivers, 5, $1 50 and $1 25; blacksmith, 1, $1 80; repair men, 3, $1 75 and $1 50; miners, 35, 40 cents per ton; stableman, 1, 60 cents; dumper, 1, $1 25; boys, 2, 50 cents.

Time employed during year, 7 months.

ORE MINES—NO. 4, TUNNEL—PIERSON'S, PATTERSON'S, NAUGLES.

Employés: Foremen, 2, $1 50; weighmasters, 2, $1 10; blacksmiths, 2, $1 80 and $1 53; carpenter, 1, $1 25; timber men, 3, $1 12; stable men, 2, $1; engineer, 1, $1 50; dumper, 1, $1 25; teamster, 1, $1 12; mill men, 2, $1; haulers, 6, $1 12; miners, 90, $1 50.

Time employed during year, 11 months.

KEMBLE COAL & IRON CO.

BLAIR COUNTY.

Altoona Iron Company.

Altoona, Blair county.

Establishment located in Altoona, Blair county.

Whole number of persons employed, 156.

Amount of capital employed in business, $88,350 31, mill and improvements; $20,000, working capital.

Amount paid annually for wages of employés, $54,565 67.

Amount paid for materials used in business, $123,396 16.

Number of tons and value of annual products: number of tons sold 4,911; $188,231, annual product in dollars.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1		$2 50			261	
Foreman,	1		1 25				
Heaters,	3		5 27				By ton—average day.
Heaters, (helpers,)	3		1 20				By ton—average day.
Puddlers,	24		2 75				By ton—average day.
Puddlers, (helpers,)	24		1 36				By ton—average day.
Rollers,	3		5 30				By ton—average day.
Rollers, (helpers,)	17	10					By ton—average day.
Stockers,	4		1 15		10		
Engineers,	2		1 50				By ton—average day.
Firemen,	2		1 10				By ton—average day.
Blacksmith,	1		2 39		10		
Blacksmith, (helper,)	1		1 33		10		
Machinist,	1		3 00		10		
Carpenter,	1		1 30		10		
Hookers,	3		70				By ton—average day.
Catchers,	5		1 25				By ton—average day.
Weighman,	1		2 17		10		
Common laborers,	29	6	1 09	$0 50	10		
Shearmen,	4	4	1 10	75	10		
Bundlers.	4		1 25		10		
Teamsters,	2		1 09		10		

CHARACTERISTICS OF ESTABLISHMENT.—First put in operation in April, 1873, six single and one double puddling furnaces, three heating furnaces, three trains rolls, (one eighteen inch, one sixteen inch, one eight inch,) and and rotary squeezer. During the past year two double puddling furnaces, one eight inch train, one double and one single steam shear, and one heating furnace have been added to the works. Product—bar, band, and hoop iron. Annual capacity, 6,000 net tons. Light irons a specialty. Brand, "Altoona."

W. M. WHEATLEY,
Secretary and Treasurer.

CAMBRIA COUNTY.

Cambria Iron Company.

Johnstown, Cambria county.

Establishment located in Cambria county.

Whole number of persons employed, 1,348.

Amount of capital employed in business, total capital of Cambria Iron Company—$3,000,000.

Amount paid annually for wages of employés, $440,000.

Number of tons and value of annual products: 81,455 gross tons iron and steel rails; $3,180,170.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Heaters, ...	60	. .	$2 50 to 3 00	. .	. . .	Twelve months.	Hands mentioned work by the ton.
Heaters, (helpers,) . .	84	. .	1 25 to 1 50	. .	. . .		
Puddlers, ...	72	. . .	2 22	. . .	. .		
Puddlers, (helpers,) .	72	. . .	1 11	. . .	. . .		
Rollers, ...	30	. .	1 50 to 5 00	. .	. . .		
Stockers and pilers, .	60	.	1 50 to 1 75	. .	. . .		
Buggymen, ...	40	10	1 92	$0 60	. . .		
Engineers, ...	18	10	1 13 to 1 75	60 to 80	.		
Engineers on locomotives, ...	24	. . .	1 35	. .	. . .		
Firemen, ...	20	. . .	1 20	. . .	. . .		
Brakemen, ...	24	. .	1 00 to 1 13	. .	. . .		
Hot straightener, . . .	12	. . .	2 02	. . .	. . .		
Cold straightener, . .	12	. . .	3 90	. .	. . .		
Gaggers, ...	12	. . .	2 50	. . .	. . .		
Ashmen & cindermen,	30	.	1 00	. . .	. . .		
Hookers, ...	50	. .	6 84 to 2 56	. .	. . .		
Catchers, ...	36	. .	1 06 to 2 56	. .	. . .		
Weighmen, ...	4	. . .	2 00	. . .	. . .		
Sand crusher, ...	10	. .	64 to 1 41	. .	10		
Cold shears, ...	30	. .	95 to 1 80	. .	10		
Railroads, ...	30	. .	78 to 1 30	. .	10		
Coal shovelers, ...	18	. .	95 to 1 10	. .	10		
Day laborers, ...	175	75	78 to 1 00	50 to 70	10		
Wire-rod mill, ...	50	10	1 00 to 5 00	50 to 70	. .		
Other hands in and about mill, ...	150	50	. . .	. . .	. . .		
Teamsters, ...	70	10	. . .	. . .	. . .		

CAMBRIA IRON COMPANY,
POWELL STACKHOUSE, *A. G. M.*

Bessemer Steel Works.

Johnstown, Cambria county.

Establishment located in Cambria county.

Value in dollars of annual product, 88,514 gross tons ingots, $2,832,448.

Whole number of persons employed, 350.

Amount of capital employed in business: included in total capital of C. I. Co.

Amount paid annually for wages of employés, $209,897 72.

Amount paid for materials used in business: value of material used, $2,100,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Converting departm't,	240	10	$1 50 to 3 50	$0 60 to 0 75			
Blooming-mill, ...	95	5	1 50 to 3 50	60 to 75			

REMARKS.—All hands except common laborers work by the ton, and the greater number of ton hands work 8 hours for turn.

CAMBRIA IRON CO.
POWELL STACKHOUSE, *A. G. M.*

CHESTER COUNTY.

Thorndale Iron Works.

Thorndale, Chester county.

Establishment located in Caln township, Chester county.

Whole number of persons employed, about 40.

Amount of capital employed in business, $54,000.

Amount paid annually for wages of employés, nearly $18,500.

Amount paid for materials used in business, nearly $50,000.

Number of tons and value of annual products, about 1,200 tons; value, about $68,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	. . .	$7 00				These rates are approximate only.
Foremen,	2	. . .	3 50				
Heaters,	2	. .	2 50				
Heaters, (helpers,)	2	. . .	1 60				
Puddlers,	4	. . .	3 00				
Puddlers, (helpers,)	4	. . .	1 50				
Rollers,	3	. . .	1 75				
Stocker,	1	.	1 25				
Engineer,	1	. . .	2 25				
Blacksmith,	1	. . .	1 75				
Blacksmith, (helper,)	1	. . .	1 00				
Carpenters,	. . .	. . .	.	. . .	. . .	.	Only seldom.
Hooker,	1	. .	1 00				
Catchers,	3	. . .	1 60				
Weighmen,	10	. . .	. . .		. . .	. .	Not classified.
Common laborers,	3	1	1 00	$0 70	10	. .	Half time.

CHARACTERISTICS OF ESTABLISHMENT.—Manufacture of boiler and plate iron.

WM. L. BAILEY.

Horace A. Beale & Co.

Parkesburg, Chester county.

Establishment located in Parkesburg, Chester county.

Whole number of persons employed, about 100.

Amount of capital employed in business, $125,000.

Amount paid annually for wages of employés, about $40,000.

Manager, 1; foremen, 2; heaters, 6; heaters, (helpers,) 6; puddlers, 8; puddlers, (helpers,) 8; rollers, 4; rollers, (pilers,) 6; stockers, 2; buggymen, (hammer boys,) 2; engineers, 3; scale clerk, 1; blacksmith, 1; boss puddler, 1; carpenter, 1; hookers, 4 men and 2 boys; catchers, 4; weighmen, 3; common laborers, 8; trimmers, 6; shinglers, 2; forgemen, 5; helpers, 5; stockers, 3; boss forgeman, 1.

Our laboring men we pay 12 cents an hour; all our other hands are, with few exceptions, on by the ton, at varying rates. Our works have run pretty steadily, although they have stood some, from varyious causes, and could have made perhaps 20 per cent. more output.

REMARKS.—We manufacture blooms, with charcoal, and plate iron. Trade is slow.

HORACE A. BEALE & CO.

The Phœnix Iron Company.

Philadelphia.

Establishment located in Phœnixville, Chester county.

Whole number of persons employed, average 1,141.

Amount of capital employed in business, $500,000.

Amount paid annually for wages of employés, about $428,786.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foremen,	14	. .	$2 80	. .	10	312	
Heaters,	28	. . .	2 47	. . .	12	306	
Heaters, (helpers,)	60	. . .	1 10	. . .	12	306	
Puddlers,	66	. . .	2 35	. . .	12	306	
Puddlers, (helpers,)	62	. . .	1 35	. . .	12	306	
Rollers,	21	. . .	1 66	. .	12	306	
Stockers and pilers,	26	. . .	1 09	. . .	10	306	
Buggymen,	10	. . .	1 33		12	306	
Engineers & watermen,	20	2	1 11	$0 80	12	312	
Firemen,	5	. . .	1 21	. .	12	306	
Blacksmiths,	19	. . .	1 62	. . .	10	286	
Blacksmiths, (helpers,)	19	. . .	1 14	. . .	10	286	
Machinists,	52	. . .	1 85	. . .	10	286	
Machinists, (helpers,)	210	. . .	1 18	. . .	10	286	
Carpenters & painters,	30	. . .	1 70	. . .	10	286	
Carpenters, (helpers,)	10	. . .	1 00	.	10	286	
Hookers,	36	16	92	67	12	306	
Catchers,	30	. . .	98	. . .	12	306	
Weighmen,	3	. .	1 29	. . .	12	306	
Common laborers,	225	. . .	1 07	. . .	10	310	
Bricklayers,	8	. . .	2 25	. . .	10	275	
Helpers,	11	. . .	97	. .	10	275	
Hydraulic men,	20	. . .	1 52	. . .	10	259	
General work,	13	.	1 88	. .	10	306	
Mill boys,	. . .	90	. .	55	12	306	
Shearmen,	17	. . .	97	. .	10	306	
Apprentices,	. . .	18	. . .	60	10	286	

DAUPHIN COUNTY.

Estate of James McCormick, deceased.

Harrisburg, Dauphin county.

Establishment located in Fairview, Cumberland county.

Whole number of persons employed, 310.

Amount of capital employed in business, $300,000.

Amount paid annually for wages of employés, $79,800.

Amount paid for materials used in business, $160,000.

Number of tons and value in dollars of annual products, 121,880 kegs nails; value at $304,700.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foremen,	5						
Heaters,	6	...	$0 44 per ton.				
Heaters, (helpers,)	6	...	22 per ton.				
Puddlers,	24	...	3 50 per ton.				
Puddlers, (helpers,)	24	...	28e. per heat.				
Rollers,	4						
Rollers, (helpers,)	12						
Nailers,	25						
Feeders,	69						
Stoekers,	5	...	1 00				
Engineers,	2	...	1 75				
Firemen,	6	...	1 25				
Blacksmiths,	3	...	2 00				
Blacksmiths, (helpers)	2	...	1 13				
Machinists,	4	...	1 50				
Carpenters,	2	...	1 70				
Hookers,	5	...	1 18				
Catchers,	8	...	1 15				
Weighmen,	1	...	1 $12\frac{1}{2}$				
Common laborers,	50	5	1 00	$0 60			
Coopers,	10	...	1 44				
Shearsmen,	5	3					
Nail packers,	3	3	$1\frac{5}{8}$ c. per keg.				
Scrap pilers,	6	6					
Masons,	2	...	1 42				
Clerks,	3	...	2 60				

REMARKS.—Run during the year about two thirds of full time.

HENRY McCORMICK, *Treasurer.*

LANCASTER COUNTY.

Susquehanna Iron Company.

Columbia, Lancaster county.

Establishment located in Lancaster county.

Whole number of persons employed, 150.

Amount of capital employed in business, $100,000.

Amount paid annually for wages of employés, $60,000.

Amount paid for materials used in business, $130,000.

Number of tons and value of annual products, 7,000 tons; $280,000.

CHARACTERISTICS OF ESTABLISHMENT.—A bar and guide rolling-mill, making iron of all sizes, from seven eighth of an inch to nine inches flat, and from five sixteenth to four inches round and square. The mill situated in a district where superior pig iron is made, insures an iron of superior quality in the bars made.

SUSQUEHANNA IRON COMPANY,
By R. ELLIS & Co.

Van DeSande & Capp.

Lebanon, Lebanon county.

Establishment located in Lebanon county.

Whole number of persons employed, 21.

Amount of capital employed in business, $60,000.

Amount paid annually for wages of employés, $8,000.

Amount paid for materials used in business, $25,000.

Number of tons of annual products, 1,350 tons bar iron.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
On rolls,	4	...	$9 00	...	10	300	
On furnace,	2	...	4 00	...	10	300	
On engine,	1	...	1 75	...	10	300	
On sundry work, labor, &c.,	10	...	10 00	...	10	300	
On rolls,	..	3	...	$1 80	10	300	

VAN DeSANDE & CAPP.

LEHIGH COUNTY.

Allentown Rolling-Mill Company.

Allentown, Lehigh county.

Establishment located in Allentown, Lehigh county.

Whole number of persons employed, 275.

Amount of capital employed in business, $444,500 capital stock.

Amount paid annually for wages of employés, $112,337 15.

Amount paid for materials used in business, $232,467 21.

Number of tons and value of annual products: 8,407 tons; $331,280

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foremen,	3	...	$2 75	...	...	Two hundred and one.	
Heaters,	12	...	2 75	...	...		
Heaters, (helpers,)	14	...	1 35	...	...		
Puddlers,	56	...	2 45	...	...		
Puddlers, (helpers,)	56	...	1 22	...	...		
Rollers,*	14	...	...	...	...		
Rollers, (helpers,) different kind,*	30	...	...	...	...		
Stockers and shearers,	16	...	95	...	...		
Buggymen,	8	...	1 20	...	...		
Engineers,	11	...	1 30	...	...		
Fireman,	1	...	1 25	...	...		
Blacksmiths,	4	...	1 45	...	...		
Blacksmiths, (helpers,)	4	...	85	...	...		
Machinists,	3	...	1 50	...	...		
Carpenters,	2	...	1 48	...	...		
Hookers,	4	20	1 10	$0 50	...		
Catchers,	14	...	1 25	...	...		
Weighmen,	2	...	90	...	...		
Laborers,	22	...	85	...	...		
Teamsters,	6	...	90	...	...		
Teamsters' help,	6	...	85	...	...		
Bricklayers,	3	...	2 00	...	...		
Bricklayers' help,	6	...	85	...	...		
Boiler tenders,	6	...	1 35	...	...		
Watchmen,	4	...	90	...	...		
Pig iron men,	6	...	90	...	...		
Water boys,	...	6	...	50	...		

* Contract.

MIFFLIN COUNTY.

Logan Iron and Steel Company.

Lewistown, Mifflin county.

Establishment located in Mifflin county.

Whole number of persons employed, 38.

Amount paid annually for wages of employés, $18,947 53.

Amount paid for materials used in business, $55,000.

Number of tons and value of annual product, 1,737 tons; $78,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	$4 00	...	...	313	
Heater,	1	...	2 28	...	...	310	
Heater, (helper,)	1	...	1 38	...	...	310	
Puddlers,	6	...	2 50	...	...	310	
Puddlers, (helpers,)	6	...	1 25	...	...	310	
Rollers,	2	...	3 35	...	...	310	
Rollers, (helpers,)	3	...	1 55	...	...	310	
Stockers,	4	...	1 25	...	...	310	
Engineer,	1	...	1 25	...	...	310	
Blacksmith,	1	...	1 50	...	...	310	
Blacksmith, (helper,)	1	...	89	...	...	310	
Hookers,	1	1	75	$0 50	...	310	
Catchers,	1	...	1 14	...	...	310	
Common laborers,	5	...	93	...	...	300	
Straightening iron,	...	2	...	75	...	310	
Watchman,	1	...	1 10	...	...	312	

R. H. LEE, *Superintendent.*

MONTOUR COUNTY.

The Co-operative Iron and Steel Works.

Danville, Montour county.

Establishment located in Montour county.

Whole number of persons employed, 140.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $50,000.

Amount paid for materials used in business, $260,000.

Number of tons, and value of annual products, 10,500 tons; value $370,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foreman,	1						
Heaters,	10	..	$3 00 to 4 00				
Heaters, (helpers,)	10	..	1 50 to 2 00				
Puddlers,	4	...	2 25				
Puddlers, (helpers,)	4	...	1 25				
Rollers,	3		4 00 to 5 00				
Rollers, (helpers,)	10	...	2 00				
Stockers,	8	...	1 50				
Buggyman,	1	...	1 50				
Engineers,	3	...	1 55				
Firemen,	2	...	1 00				
Blacksmith,	1	...	1 55				
Blacksmith, (helper,)	1	...	1 00				
Machinist,	1	...	2 50				
Carpenter,	1	...	1 50				
Hookers,	4	..	1 50				
Catcher,	1	...	1 75				
Weighmen,	2	...	2 00				
Common laborers,	30	...	95				
Boys employed,	...	25	...	$0 65			

CHARACTERISTICS OF ESTABLISHMENT.—The Coöperative Iron and Steel Company's rail-mill contains, 5 heating furnaces; 1 18-inch rail train, with rolls, for the manufacture of all shapes and sizes of rails; 1 250-horse power engine; 1 No. 1 Sturtevant fan; 1 set of saws; 1 50-horse power engine; and all necessary machinery, &c. for running a first class rail-mill. The puddle-mill contains, 7 puddling furnaces; 1 18-inch train of muck rolls; 1 30-horse power engine; and all necessary machinery, &c. Capacity, about 12,000 tons railroad iron annually.

L. K. RISHEL,
Treasurer.

NORTHAMPTON COUNTY.

Sheet-Iron Works.

Easton, Northampton county.
Establishment located in Northampton county.

Whole number of persons employed, 35.

Amount of capital employed in business, $35,000 to $40,000.

Number of tons of annual products, 1,047 tons sheet iron, (gross.)

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Heater,	1						
Heater, (helper,)	1						
Puddlers,	4						
Puddlers, (helpers,)	4						
Rollers,	3						
Rollers, (helpers,)	6						
Buggymen,	2						
Engineers,	2						
Blacksmith,	1						
Blacksmith, (helper,)	1						
Hooker,	1						
Catcher,	1						
Drag-out,	1						
Common laborers,	2		$1 50				
Trimmer,	1						
Trimmers, (helpers,)		2	$0 75 to 1 35				
Annealer,	1						
Annealer, (helper,)	1						

REMARKS.—Mill runs day and night, nearly the whole year. All of our men work by the ton. Our Mr. Oliver is manager, foreman, &c.

OLIVER & CO.

The Bethlehem Iron Company.

Bethlehem, Northampton county.

Establishment located in Northampton county.

The works of this company comprise 7 blast furnaces, including 1 leased; 2 rolling-mills, 1 hoop-mill, machine shop, foundry, carpenter and blacksmith shops.

Whole number of persons employed, including men at mines, 1,800 to 2,000.

Capital stock, $2,000,000.

Amount paid annually for wages of employés, $599,868 30.

Product for the year 1878, with valuation: pig and speigel iron, 79,637 gross tons; steel rails and shapes, 75,793 gross tons; iron rails, 1,852 gross tons; valuation, 3,908,917.

MONTGOMERY COUNTY.

Pottstown Iron Company.

Pottstown, Montgomery county.
Establishment located in Montgomery county.
Whole number of persons employed, about 450.
Amount of capital employed in business, $500,000.
Amount paid annually for wages of employés, about $175,000.
Amount paid for materials used in business, about $270,000.
Number of tons and value of annual product, 11,300 tons, (2,000 lbs.)

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1						
Foremen,	4	...	$3 00 to 4 00				Per ton.
Heaters,	12	...	2 00 to 2 50				Per ton.
Heaters, (helpers,)	12	...	1 25 to 1 40				Per ton.
Puddlers,	64	...	2 00 to 2 50				
Puddlers, (helpers,)	64	...	1 15 to 1 25				
Rollers,	7	...	1 80 to 2 00				
Engineers,	4	...	1 75 to 2 00		12		
Blacksmiths,	4	...	1 50 to 2 25		10		
Blacksmiths, (helpers,)	4	...	1 20		10		
Machinists,	6	...	1 65 to 2 25		10		
Carpenters,	3	...	1 25 to 1 35		10		
Common laborers,	12	1	1 00		10		
Nailors,	21	...	2 00 to 3 00	...	...	...	Per keg.
Feeders,	54	...	1 00 to 1 25	...	...	...	Per keg.
Roll men,	50	...	1 25 to 1 40	...	...	...	Per ton.
Miscellaneous,	100 to 128	...	1 20 to 1 35				
Coopers,	8	...	1 50 to 1 60	...	...	...	Per keg.

W. H. MORRIS, *Treasurer*,
Per GORDON.

James Hooven & Sons.

Norristown, Montgomery county.
Establishment located in Norristown, Montgomery county.
Whole number of persons employed, 110.
Amount of capital employed in business, $200,000.
Amount paid annually for wages of employés, $23,000.
Amount paid for materials used in business, $63,000.
Number of tons and value of annual product, 2,200 tons ; $100,000.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Foreman,	1	Number of boys, 10.	$1 50, on average.	80 cents, on average.	10	200	The mill has not been running more than two fifths of its capacity, on account of scarcity of orders at paying prices.
Heaters,	4						
Heaters, (helpers,)	4						
Puddlers,	16						
Puddlers, (helpers,)	16						
Rollers,	5						
Rollers, (helpers.)	5						
Stockers,	4						
Buggymen,	1						
Engineers,	2						
Blacksmith,	1						
Blacksmith, (helper,)	1						
Machinists,	2						
Carpenter,	1						
Hookers,	7						
Catchers,	7						
Weighmen, laborers, carters, &c.,	33						

Characteristics of Establishment.—Our establishment is employed in the manufacture of skelp iron.

JAMES HOOVEN & SONS.

J. Wood & Brothers.

Conshohocken, Montgomery county.

Establishment located in Montgomery county.

Whole number of persons employed, 172.

Amount of capital employed in business, $300,000.

Amount paid annually for wages of employés, about $60,000 for 1878.

Amount paid for materials used in business, $150,000.

Number of tons and value of annual products, 3,500 tons; value, about $220,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Manager,	1	...	$8 50	...	...	242	
Foremen,	2	...	3 40				
Heaters,	10	...	...	...	...	...	Paid by the ton, 81 cts.
Heaters, (helpers,)	5	...	...	...	...	...	Paid by the ton, 50 cts.
Puddlers,	24	...	...	...	...	...	Paid by the ton, $3 80.
Puddlers, (helpers,)	24	...	...	...	...	...	Paid by the ton.
Rollers,	13	...	...	...	...	...	Paid by the ton.
Rollers, (helpers,)	7	...	...	...	...	...	Paid by the ton.
Stockers,	3	...	1 36				
Engineers.	4	...	...	...	...	...	$11 75 per week.
Blacksmiths,	2	...	1 46				
Machinists,	2	...	...	...	...	...	1 at $2 61 and 1 at 1 33.
Carpenter,	1	...	1 35				
Drag-outs,	4	...	...	...	...	...	Paid by the ton.
Hookers,	7	...	...	...	...	...	Paid by the ton.
Catchers,	13	...	...	...	...	...	Paid by the ton.
Weighmen,	4	...	1 02				
Trimmers,	3	...	...	...	...	...	Paid by the ton.
Helpers,	3	...	...	...	...	...	Paid by the ton.
Pounders,	3	...	...	...	...	...	Paid by the ton.
Packers,	2	...	...	...	...	...	Paid by the ton.
Carters,	3	...	1 02				
Clerks,	2	...	2 00				
Annealers,	6	...	...	...	...	...	Paid by the ton.
Laborers,	27	...	1 02				

REMARKS.—Business for the year has been very unsatisfactory, prices so very low that we do not expect to realize one per cent. on our capital. We were not in operation the entire year. A great many of our employés are paid by the ton, and it is therefore impossible for us to give you the exact amount paid them per day. Our works are known as the Conshohocken, Pennsylvania and Corliss Iron Works. They consist of three (3) separate mills, two drawn by steam power and one by water. Our production is sheet and plate iron of all sizes and gauges, from one half inch up to No. 30, W. G.

J. WOOD & BROTHERS.

Schuylkill Iron Works.

Conshohocken, Montgomery county.

Establishment located in Montgomery county.

Whole number of persons employed, 270.

Amount of capital employed in business, $800,000.

Amount paid annually for wages of employés, $126,000—averaged for December.

Amount paid for materials used in business, $270,000—averaged for December.

Value of annual products, $400,000—averaged for December.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Managers,	...	...	...	...	...	...	Owners.
Foremen,	3	...	$4 50				Most of the men work by the ton. The wages given are about the average.
Heaters,	10	...	3 15				
Heaters, (helpers,)	10	...	2 25				
Puddlers,	28	...	2 50				
Puddlers, (helpers,)	28	...	1 30				
Rollers,	20	...	1 60 to 3 60				
Stockers,	4 2	... ...	1 14 1 45				
Buggymen,	2 2	... ...	1 06 1 14				
Engineers,	8	...	2 35				
Blacksmiths,	2	...	2 00				
Blacksmiths, (helpers,)	2	...	1 14 1 06				
Machinists,	3	...	2 70				
Carpenters,	2	...	3 00 1 80				
Hookers,	6	...	80 to 2 00				
Catchers,	20	...	1 35 to 2 70				
Weighmen,	6	2	1 14 to 1 50	60			
Common laborers,	10 to 15	...	1 06				

About 60 to 70 men at skilled labor, not enumerated above, paid from $1 50 to $4 00 per day.

CHARACTERISTICS OF ESTABLISHMENT.—We have a capacity of from 12,000 to 15,000 tons per annum, and can employ 500 men. Manufacture sheet and plate iron.

ALAN WOOD & CO.

Potts Brothers.

Pottstown, Montgomery county.

Establishment located in Pottstown, Montgomery county.

Whole number of persons employed, 43.

Amount of capital employed in business, $100,000,

Amount paid annually for wages of employés, $13,000.

Amount paid for materials used in business, $86,000.

Number of tons and value of annual product, 1,740 tons plates, and 800 tons P. bar; $115,000.

Number of men employed: Manager, 1, $80; foreman, 1; heaters, 3; heaters, (helpers,) 3; puddlers, 4; puddlers, (helpers,) 4; rollers, 3; watchman, 1; stocker, 1; buggyman, 1; engineer, 1; blacksmith, 1; blacksmith, (helper,) 1; hooker, 1; catchers, 3; straighteners, 2; levermen, 2; pilers, 2; extra hands, 3, squeezman, 1.

Days in operation during year: 150.

CHARACTERISTICS OF ESTABLISHMENT.—Manufacture boiler tube iron; pipe iron; tank iron; boiler plate. Took the premium for boiler plate at the Centennial Exposition in 1876.

POTTS BROTHERS.

WESTMORELAND COUNTY.

Everson, Macrum & Co.

Scottdale, Westmoreland county.

Establishment located in Scottdale, Westmoreland county.

Whole number of persons employed, 120.

Amount of capital employed in business, $400,000 to $500,000, in connection with other operations.

Amount paid annually for wages of employés, $24,812 09, only a little of what would be used if in full operation all year.

Amount paid for materials used in business, $33,479.

Number of tons and value of annual product, 1,496$\frac{341}{2240}$ tons muck iron, and 715$\frac{579}{2000}$ tons sheet iron.

Classification.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	Remarks.
Manager,	1	1	. .	$0 50	Six to ten.	365	Average time worked during 1878 was about 60 days.
Heaters,	6	2	$2 25	30		250	
Heaters, (helpers,)	6	. . .	1 50	. . .		250	
Puddlers,	24	. . .	3 00	. . .		250	
Puddlers, (helpers,)	24	. . .	1 75	.		250	
Rollers,	6	2	4 00	50		250	
Rollers, (helpers,)	6	. . .	1 75	. . .		250	
Stockers,	3	. . .	1 50	. . .		250	
Buggymen,	2	. . .	1 60	. . .		250	
Engineers,	2	. . .	2 25	. . .		250	
Firemen,	2	. . .	1 50	. .		250	
Blacksmith,	1	. . .	2 00	.		250	
Blacksmith, (helper,)	1	. . .	1 25	. . .		256	
Carpenter,	1	. . .	1 75	. .		250	
Hookers,	2	. . .	1 25	. . .		250	
Catchers,	6	. . .	2 00	. . .		250	
Weighmen,	2	. . .	1 25	. . .		250	
Common laborers,	6	. . .	1 00	50	10	250	
Bundlers,	2	. . .	1 40	. . .	10	250	
Bricklayers,	1	. . .	1 25	. .	10	250	
Matchers,	8	. . .	1 35	. .	6 to 10	250	
Shearmen,	3	2	1 75	50		250	

EVERSON, MACRUM & CO.

FORGES.

ALLEGHENY COUNTY.

Pittsburgh Forge and Iron Company.

Pittsburgh, Allegheny county.
Establishment located in Allegheny county.
Whole number of persons employed, 20.
Amount of capital employed in business, mill and forge all in one.
Amount paid annually for wages of employés, $10,500.
Amount paid for materials used in business, $70,000.
Number of tons and value of annual products, 1,100 tons; $80,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Hammermen, ...	3	. .	1 at $5 00 2 at 3 00	. . . .	10	290	
Hammermen, (helpers,)	7	. .	1 at 1 70 4 at 1 50 2 at 1 60				
Hammermen, (drivers,)	. . .	3	. . . .	1 at $1 45 2 at 1 00			
Common laborer, ...	1	. . .	1 12½				
Engineer, ...	1	. . .	1 55				
Watchman, ...	1	. . .	1 55				
Heaters at hammers, . .	3	. .	1 at 3 00 2 at 2 75				
Axle latheman,*	1						

* Piece-work, makes about $2 00 per day.

PITTSBURGH FORGE AND IRON COMPANY,
J. K. VERNER, *Secretary.*

DAUPHIN COUNTY.

Killinger, Kaufman & Co.

Ellendale Forge, Dauphin county.
Establishment located in Dauphin county.
Whole number of persons employed, 26.
Amount of capital employed in business, $10,000.
Amount paid annually for wages of employés, $14,000.

Amount paid for materials used in business, $34,000.

Number of tons and value of annual product, 1,000 tons blooms; $48,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Forgemen,	8	...	$2 00	...	12	200	
Blacksmith,	1	...	1 50	...	10	300	
Teamsters,	2	...	85	...	10	300	
Helpers,	2	...	1 50	...	12	200	
Helper,	1	...	1 00	...	12	200	
Colliers,	3	...	1 00	...	12	150	
Wood choppers,	9	...	1 00	...	10	150	

REMARKS.—Forge; manufacture anthracite and charcoal blooms, for sheet, flue, and boiler iron. Five refinery fires, one runout. One two-ton hammer; water power.

P. C. SNYDER, *Manager.*

CHESTER COUNTY.

Miss Esther Kaufman.

St. Peters, Chester county.

Establishment located in Chester county.

Whole number of persons employed, 10 men.

Amount of capital employed in business, $3,500.

Amount paid annually for wages of employés, $4,700.

Amount paid for materials used in business, $21,000.

Number of tons and value of annual products, about 600 tons a year; value, $27,000.

CLASSIFICATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Forgemen,	6	...	$4 50 a ton.	...	12 to 14	260	
Run-outs,	2	...	1 60 a ton.	...	12 to 14	260	
Laboringmen,	2	...	1 10	...	10	260	

ESTHER KAUFMAN.

RAILROAD—LABOR REPORT.

Atlantic and Great Western Railroad.—J. H. Devereux, Receiver, Meadville.

	Men.	Pay per day.	Boys.	Pay per day.	Average hours worked per day.	Pay of men per month.	Pay of boys per month.
General master mechanic, . . .	1	$8 65	. . .	. . .	8	$225 00	
General master car builder, . .	1	8 65	. . .	. . .	8	225 00	
General purchasing agent, . . .	1	8 01	. . .	. . .	8	208 34	
Auditor, ...	1	14 42	. . .	. . .	8	375 00	
Treasurer, ...	1	10 09	. . .	. . .	8	262 50	
Pay-master, ...	1	5 19	. . .	. . .	8	135 00	
Division superintendents, . . .	2	7 21	. . .	. . .	8	187 50	
Local engineer, ...	1	5 38	. . .	. . .	8	140 00	
Master mechanic of shops, . . .	1	5 19	. . .	. . .	9	135 00	
General foremen of shops, . . .	16	2 55	. . .	. . .	9	66 27	
Road foremen, ...	3	3 22	. . .	. . .	10	83 66	
Chief clerk maintenance of way,	1	3 84	. . .	. . .	8	100 00	
Clerks, ...	53	2 68	. . .	. . .	8	69 68	
Telegraph operators, ...	21	1 85	. . .	. . .	10	48 15	
Tickets agents.	5	2 56	. . .	. . .	10	66 60	
Train dispatchers, ...	6	3 99	. . .	. . .	8	103 83	
Locomotive drivers, ...	79	3 50	. . .	. . .	9	90 89	
Conductors, (passenger,) . . .	8	3 58	. . .	. . .	8	82 78	
Conductors, (freight,)	55	2 49	. . .	. . .	10	64 85	
Brakemen, ...	195	1 84	. . .	. . .	10	47 93	
Firemen, ...	88	1 91	. . .	. . .	9	49 65	
Watchmen, ...	22	1 48	. . .	. . .	10	38 61	
Track foremen, ...	30	1 80	. . .	. . .	10	46 70	
Trackmen, ...	199	1 10	. . .	. . .	10	28 60	
Baggage-masters, ...	6	1 75	. . .	. . .	10	45 59	
Bridge builders and carpenters,	13	2 57	. . .	. . .	10	66 91	
Car builders, ...	16	2 31	. . .	. . .	8	60 06	
Blacksmiths, ...	26	2 53	4	$1 16	8 and 9	65 78	$30 16
Machinists, ...	62	2 25	. . .	. . .	9	58 50	
Boiler makers, ...	11	2 37	. . .	. . .	9	61 62	
Tinners, ...	2	2 07	. . .	. . .	9	53 82	
Coppersmiths, ...	2	2 35	. . .	. . .	9	61 10	
Common laborers, ...	143	1 51	6	90	8,9,and 10	39 26	23 40
Switch tenders, ...	27	2 14	. . .	. . .	10	55 75	
Painters, ...	6	2 31	. . .	. . .	9	60 06	
Car repairers, ...	27	1 65	. . .	. . .	8	42 90	
Freight agents, ...	4	3 63	. . .	. . .	10	94 37	
Freight and ticket agents and operators, ...	19	1 82	. . .	. . .	10	47 30	

This statement is based upon full time for the year, (313 working days.) Mechanics and blacksmiths and that class of laborers are, however, reduced to eight and nine hours per day as a matter of economy—ten hours being the standard day's work.

Main Line and Branches.

	Miles.	In Pa.
Main Line—Salamanca, N. Y., to Dayton, O.,	387.50	92.42
Franklin Branch—Junction west of Meadville to Oil City,	33.78	33.78
Silver Creek—Junction east of Wadsworth to Silver Creek,	1.55	
Length of main line and branches,	422.83	126.20

Leased Lines.

	Miles.	In Pa.
Cleveland and Mahoning railroad—Cleveland to Pennsylvania State Line,	80.00	
Westerman railroad—Pennsylvania State Line to Sharon,	1.50	1.50
Sharon railway—Sharon to A. and G. W. main line,	7.73	7.73
Length of leased lines,	89.23	9.23
Total of main line and branches and leased lines,	512.06	135.43
Sidings and other tracks not above enumerated,	219.03	42.03
Total mileage of track,	731.09	177.46

Miles of iron rail track in use,	502.46
Miles of steel rail track in use,	228.63
Total,	731.09

Gauge of lines: 6 feet, 4 feet $9\frac{1}{4}$ inches, and 4 feet $9\frac{3}{8}$ inches.

Weight of rail per yard: Iron, 68, 60, and 56 pounds; steel, 64, 60, 56, and $51\frac{1}{2}$ pounds.

THOMAS WARNOCK,
Auditor.

The Buffalo, New York, and Philadelphia Railway Company.

	Men.	Pay per day.	Women.	Pay of men per month.	Pay of women per month.
General manager,	1			$166 66	
Treasurer,	1			125 00	
General superintendent,	1			150 00	
General master mechanic,	1			125 00	
Attorney,	1			150 00	
Assistant superintendent,	1			100 00	
General foremen of shops,	2			60 00	
Chief clerk of motive power,	1			60 00	
Road foreman,	1			85 00	
Clerks,	57			20 00 to 85 00	
Telegraph operators,	15			30 00 to 45 00	
Ticket and freight agents,	23			35 00 to 85 00	
Depot masters,	2			70 00	
Train dispatchers,	2			55 00 & 65 00	
Locomotive drivers,	29			75 00 to 100 00	
Conductors, (passenger,)	3			60 00	
Conductors, (freight,)	15			60 00	
Brakemen,	57			40 00	
Firemen,	29			40 00 to 50 00	
Watchmen,	12			30 00	
Track foremen,	24			40 00	
Track foreman,	1			60 00	
Trackmen,	150	$1 00			
Baggage masters,	4			45 00	
Carpenters,	23			40 00 to 50 00	
Car repairers,	15			30 00	
Blacksmiths and helpers,	13			30 00 to 50 00	
Machinists,	9			40 00 to 50 00	
Boiler makers,	4			45 00 to 50 00	
Tinner,	1			45 00	
Common laborers,	13			30 00	
Switch tenders,	22			15 00 to 40 00	
Painters,	4			30 00 to 45 00	
Car cleaners,			2		$18 00
Janitress,			1		12 00

REMARKS.—Line runs between Buffalo, N. Y., and Emporium, Pa., a distance of $120\frac{55}{100}$ miles. Distance in Pennsylvania, $41\frac{90}{100}$ miles.

GEORGE S. GATCHELL, *Gen. Supt.*

Bellefonte and Snowshoe Railroad Company.

Bellefonte, Centre county, Pennsylvania.

President, salary, $600 per annum; general manager, general superintendent, and treasurer, 1, salary, $3,000 per annum; chief engineer, 1, salary, $1,200 per annum; secretary of board of directors, 1, salary, $200 per annum; directors, 5, no salary; master mechanic of shops, 1; chief clerk, 1, salary $1,200 per annum; clerks and telegraph operators, 2, salary, $50 per month, full time; depot master, 1, $1 75 per day; locomotive drivers, 3, $2 70 per day; conductor, (passenger,) 1, $2 03 per day; conductors, (freight,) 2, $2 03 per day; brakemen, 7, $1 35 per day; firemen, 3, $1 71 per day—will average 23 days each per month; watchmen and hostlers, 2, $40 per month; track foremen, 5, $37 80 per month; trackmen, 15, 95 cents per day, and will average 24 days each per month; carpenter, 1, $2 03 per day; car builders, 2—1, $2 03 per day, and 1, $1 25 per day; blacksmith, 1, $2 03 per day; machinist, 1, $1 80 per day; helper in shop, 1, $1 00 per day—averaging about 23 days each per month; switch tender, 1, $37 per month; laborers at coal-yards, 4, $1 00 per day.

CHARACTERISTICS OF ROAD.—The Bellefonte and Snowshoe Railroad, from Bellefonte to Snowshoe coal mines, is 25$\frac{3}{10}$ miles in length. The tonnage of the road consists of coal taken from the mines of the company, and lumber from the company's land, together with charcoal, wood, &c.

DAVID RHOADS,
General Sup't and Treasurer.

Barclay Railroad.

Towanda, Pennsylvania.

	Men.	Pay per day.	Pay of men per month.	Days worked in the year.
Master mechanic of shops,	1	. . .	$100 00	312
Road foreman,	1	. . .	65 00	312
Clerk,	1	. . .	50 00	312
Chief telegraph operator,	1	. . .	80 00	312
Ticket agents,	4	$1 54	. . . .	312
Locomotive drivers,	4	3 00	. . . .	311
Conductor, (passenger,)	1	3 00	. . . .	311
Conductors, (freight,)	2	2 50	. . . .	311
Brakemen,	11	1 50	. . . .	311
Firemen,	4	1 80	. . . .	311
Watchman,	1	2 00	. . . .	311
Track foremen,	3	. . .	45 00	311
Trackmen,	14	1 00	. . . .	311
Car builders,	5	1 75	. . . .	313
Blacksmith,	1	2 50	. . . .	313
Machinist,	1	2 50	. . . .	313
Common laborers,	6	1 25	. . . .	313
Wiper,	1	1 15	. . . .	313
Foreman "plane,"	1	2 00	. . . .	313
Weigh-master,	1	. . .	50 00	313

J. B. JUDD,
Superintendent.

The Cumberland Valley Railroad.

The county of Cumberland, Pennsylvania, was formed January 27, 1750, one year subsequent to that of York, taken from the county of Lancaster. Franklin county was formed September 9, 1784, taken from Cumberland. It is principally within the counties of Cumberland and Franklin that the beautiful and famous Cumberland valley is located, extending from the Susquehanna, at Harrisburg, south-westward to the Maryland and West Virginia lines, opening into the valleys of the Potomac and Shenandoah. Eastward from Harrisburg, the Lebanon valley seems to be of similar geological formation as that of the Cumberland valley, but is separated from it by the Susquehanna river and the valley of the Susquehanna. A person taking the cars at Reading, and traveling westward, on the Philadelphia and Reading road, to Lebanon and Harrisburg, continuing his, tour across the Susquehanna, and entering the Cumberland valley, *via* the Cumberland Valley railroad, thence south-westward on the line of that road, to Hagerstown, Maryland, or to Martinsburg, West Virginia, would be impressed with the similarity of the geological formations, and the striking resemblance in physiognomy of the two valleys. The Lebanon and Cumberland valleys are divided and crossed by the valley of the Susquehanna at nearly a right angle, the valley of the Susquehanna being inclined north and south in its course, and the Cumberland and Lebanon nearly east and west, inclining slightly towards the north-east and south-west.

The counties of Cumberland and Franklin were early settled, and the inhabitants bore a conspicuous part in the wars of 1756, 1757, 1763, 1776, 1812, and 1861. Their local history forms an important page in the events which transpired during these struggles with the Indians, the French, the English, and rebels, and show their love of liberty and patriotism. They have also been distinguished for their public spirit in the establishment of schools, seminaries, and colleges, and the building of turnpikes in early times, and the construction of railroads at a later period of their history, in advance of other portions of the Commonwealth.

The Cumberland Valley railroad was incorporated on the 2d of April, 1831. The corporators were Samuel Alexander, John Harper, Charles B. Penrose, John M. Woodburn, and Andrew McDowell, of Carlisle; Adam Reigle, Henry Ford, Lewis Zearing, of Mechanicsburg, Cumberland county; Jacob M. Haldeman and John Forster, of Harrisburg, Dauphin county; and Mark Richards, of Philadelphia.

It appears that the terms of the original charter had not been complied with, and consequently, on the 15th of April, 1835, a supplement to the act of April 2, 1831, was passed by the Legislature, reviving the charter, and extending the term for commencing and finishing the work six years. A supplement to the charter was approved February 21, 1836, allowing the company to increase their capital stock, and to make arrangements with the president and directors of the Harrisburg, Portsmouth, Mount Joy, and Lancaster Railway Company, and the Board of Canal Commissioners, etc., to secure an uninterrupted communication of trade and travel between Chambersburg and the city of Philadelphia. On the 18th of February, 1836, the United States Bank was authorized to subscribe $100,000 to the capital stock of the road.

We have given this data, in order to show, to some extent, the early history of the road. Many supplements to the charter have been made, as the increased business of the company has demanded, from time to time.

In the month of October, 1835, W. Milnor Roberts, C. E., directed a communication to the president and directors of the road, in which he estimates the probable amount of freight which would pass over the road, when completed, viz :

	Tons.		Tons.
Whiskey,	5,000	Mineral coal,	5,000
Iron,	4,000	Dry goods,	2,000
Flour,	22,000	Clover-seed,	2,000
Plaster,	4,500	Oats and barley,	800
Pork and bacon,	1,000	Bark and unenumerated articles,	1,600
Leather,	400		
Paper,	400		
Butter and flax-seed,	750	Total,	51,950
Lumber,	2,500		

This estimate of Mr. Roberts was considered quite large enough at that time, but the figures appear insignificant, when compared with those of the present; and then it must be taken into consideration that the rail first laid down was not the modern T, but a strap nailed to a sleeper, and only capable of supporting an engine of ten or twelve tons weight.

The road was completed from Bridgeport, opposite Harrisburg, to Carlisle, in August, 1837, and in November of the same year, to Chambersburg. The amount received on account of passengers, freight, tolls, and mail, from August, 1837, till the 1st of January, 1840, was $143,223 29. This we learn from the report of the president of the road, T. G McCulloh, Esquire, dated March 21, 1840. Probably no railroad in the State had more difficulties to overcome, in placing their railroad on a sound financial basis, than the Cumberland Valley. Through the judicious and patient management of its officers, it finally increased in public favor, developed trade, and was entering upon a plane of great prosperity, when the war of the rebellion came on.

Its receipts for the year ending the 30th of September, 1859, from passengers, freight, and mails, were $169,125 97. This was one year before the consolidation with the new Franklin road, the Franklin road being opened for business, from Greencastle to Chambersburg, on the 6th of February, and from Hagerstown, on the 29th of February, 1860. The receipts for the year 1860, were $182,673 57, and for the year 1861, $249,778 49, an increase of $67,104 92 over previous year.

In 1862 the rebels raided Chambersburg and destroyed the depot buildings, the wood shop, machine shop, blacksmith shop, engine-house, wood sheds, &c., and three second-class engines. On the 15th of June, 1863, the rebels again destroyed property for the company, to the amount of $61,115 49.

The earnings of the road from the 1st of October, 1862, to the 30th of September, 1863, were as follows:

Cumberland Valley railroad,	$255,365 56
On Franklin railroad,	37,751 64
Total,	$293,117 20

In 1864 the receipts were as follows:

Cumberland valley railroad,	$345,449 96
Franklin railroad,	48,400 93
	$393,850 89

Of this amount $20,533 39 was for transportation of the military.

We have given the foregoing statistics for the purpose of showing the gradual increase in business of the road, for the purpose of showing the development of the valley through which it passes. Nothing could certify more plainly than these figures the general prosperity of the Cumberland Valley. This is a true exhibit of home trade. We will now make a few more statements, showing the receipts of the road:

In 1876, the receipts were, from the 1st of October, 1875, to the 30th of September, 1876, $547,993 65. It might be well to remark here, that in 1873, the Cumberland Valley had extended its line, (by lease,) to Martinsburg, West Virginia, and that the centennial year is not a fair average. Let us look.

In 1877, the receipts were $519,851 37, showing only a decrease of about $28,000.

In the year 1878, the receipts of the road were $512,121 03. Proportions of earnings in Pennsylvania to earnings of whole line, $405,599 86. It, therefore, can be safely assumed that the annual gross receipts of the Cumberland Valley railroad will, in the future, be at least, $500,000. It now extends, with its consolidated and leased lines, from Harrisburg, Pennsylvania, to Martinsburg, West Virginia, a distance of ninety-four miles, running through a valley rich in minerals, agricultural, and mechanical productions—a valley lovely in the extreme, dotted with hamlets, and towns, with an intelligent and enterprising people. The early settlers of the valley had an eye to the beautiful when they reserved the hundreds of shady groves around cooling springs, which, every summer, are resorted to by visitors, seeking shelter from the rays of a scorching sun, or rest from the strife and bustle of our large cities.

The management of the road cannot be excelled. Old and trusty railroad men are in its employ, some for a period of thirty years. The officers in the immediate charge of the road are Thomas B. Kennedy, president; E. M. Biddle, secretary and treasurer; O. N. Lull, chief engineer; and J. F. Boyd, general superintendent.

We are under obligations to Mr. Boyd for much of the statistical data, which he so very courteously furnished for this article. The following are the stations between Harrisburg and Martinsburg, with the distances from Harrisburg: Harrisburg, 0; Bridgeport, 2; White Hill, 3; Shiremantown, 5; Mechanicsburg, 8; Dillsburg Junction, 9; Kingston, 10; Middlesex, 14; South Mountain Junction, 17; Carlisle, 18; Good Hope, 23; Greason, 24; Kerrsville, 25; Newville, 30; Oakville, 34; Red Barn, 35; Ore Siding, 38; Shippensburg, 40; New Kirks, 44; Scotland, 47; Franklin Railroad Junction, Chambersburg, 52; Marion, 58; South Penn Junction, 59; Kauffman's, 60; Greencastle, 63; State Line, 68; Morgantown, 70; Hagerstown, 74; Washington, 77; Williamsport, 81; Falling Waters, 85; Beddington, 88; Berkley, 89; Martinsburg, 94.

The principal stations are Harrisburg, Mechanicsburg, Carlisle, Newville, Shippensburg, Chambersburg, Greencastle, Hagerstown, and Martinsburg. Connections with other roads are at Mechanicsburg, with the Dillsburg railroad; at Carlisle, with the South Mountain; at Mont Alto Junction, three and one half miles east of Chambersburg, with the Mont Alto railroad, recently completed to Waynesboro'; seven miles south of Chambersburg, with the Southern Pennsylvania railroad; at Hagerstown, with the Western Maryland railroad, and with the Washington branch of the Baltimore and Ohio railroad; at Martinsburg, with the Baltimore and Ohio railroad.

Principal Towns along the Line of the Cumberland Valley Railroad.

HARRISBURG.—Harrisburg is the capital of the State of Pennsylvania, and contains a population of about 28,000 inhabitants. It is beautifully situated on the east bank of the Susquehanna, and is one of the most important railroad centers in the State, the Pennsylvania railroad passing through the city, from east to west; the Northern Central, from the north to the south; the Philadelphia and Reading, east; the Schuylkill and Susquehanna, north-east; and the Cumberland Valley railroad, to the southwest. By these great trunk lines, and the numerous branch lines and connections, there is scarcely a town in the State, or the whole country, but what is in direct railroad communications with Harrisburg.

Its industries are numerous and varied, giving employment to a large number of persons.

Among these industries are the Harrisburg Cotton Manufacturing Company, Harrisburg car works, Paxton furnaces, Wister furnace, Lochiel furnace, Pennsylvania steel works, Chesapeake nail works, Central iron works, Harrisburg machine shop foundry, Lochiel iron works, Eagle works, Bay Brothers' foundry, Willson's foundry, Harrisburg boiler and tank works, fire-brick works, brick works, pottery, etc. The capital invested in these several industries amounts to several million dollars, and the annual product is not less than ten millions. The trade and commerce of the inhabitants of the Cumberland valley are considerable with the merchants, tradesmen, and manufacturers of Harrisburg, thereby increasing the freight and passenger traffic of the Cumberland Valley railroad.

MECHANICSBURG.—Mechanicsburg was incorporated as a borough, April 12, 1828; distant from Harrisburg, eight miles; contains a population of about 3,300. The Cumberland Valley Institute and the Irving Female College are located here.

The manufacturing establishments are a foundry and car shops, agricultural works, four steam, saw and planing-mills and paper-mill, spoke and wheel manufactory, and the town is supplied with gas and water works, public town hall, and market-house. It is emphatically a church going people, having ten churches. The *Farmers' Friend*, a newspaper devoted to the interest of agriculture, edited by R. H. Thomas, secretary of the State Grange, is published here.

The country surrounding Mechanicsburg is under a high state of cultivation, and the farmers are generally prosperous and forehanded.

CARLISLE.—The county seat of Cumberland county, contains a population of about 7,500. The history of the town is replete with stirring incidents, dating far back into ante-revolutionary times. The Dickinson College, located there, was chartered in 1783, and has ever maintained a high rank since its establishment.

The United States Government have barracks here, where now a few soldiers are stationed. The country surrounding is beautiful, and the surplus products are shipped over the Cumberland Valley railroad. Near Carlisle is a large paper-mill, doing an extensive business.

NEWVILLE is situated on Big Spring, twelve miles from Carlisle, and thirty miles from Harrisburg, and contains a population of about 2,000. It supports seven churches.

Several industrial establishments are located here, giving employment to quite a number of persons.

SHIPPENSBURG—Located near the county line between Franklin and Cumberland counties, on the line of the Cumberland Valley railroad. It is one of the oldest towns west of the Susquehanna, distant from Harrisburg thirty-seven miles. Incorporated as a borough in 1817. The Cumberland Valley State Normal School, of the seventh district, is located here. The culture of fish, by Mr. Ainsworth, has received considerable attention.

CHAMBERSBURG.—Chambersburg, the seat of justice of Franklin county, was laid out by Benjamin Chambers, in the year 1764. Through its extensive trade with the western country, it rapidly grew into importance.

It was erected into a borough, by the Legislature, by act of the 21st of March, 1803. Its population, in 1870, was 6,308.

Its industrial establishments consist of the Chambersburg woolen factory, a steam grist-mill, a straw board-mill, a powder-mill, an ax factory, numerous saw, planing, and grist (water) mills, and the extensive shops, engine, and machine works of the Cumberland Valley railroad.

Town destroyed by confederate troops, just one hundred years from its founding, July 30, 1864.

Greencastle, Franklin county, is an active town on the line of the Cumberland Valley railroad, eleven miles south-west from Chambersburg. Its early history, dating back to ante-revolutionary times, is very tragical and interesting. It is only distant four and one half miles from the Maryland State line, and is distinguished for its religious and school facilities.

Hagerstown, Maryland, is a thriving town, on the line of the Cumberland Valley railroad, containing a population of about 8,000. This, like all the towns along the line, are mainly supported by the agricultural districts which surround them. At this point the Cumberland Valley railroad connects with the Western Maryland and with the Washington branch of the Baltimore and Ohio. Distant from Harrisburg seventy-four miles.

Martinsburg, Berkeley county, West Virginia, is a thriving town, at the terminus of the Cumberland Valley railroad, containing about 7,000 inhabitants. It was founded more than a century ago.

During the rebellion, it suffered much from the frequent occupation of both the Union and Confederate armies. The Baltimore and Ohio Railroad Company have extensive repair and machine shops at this point, giving employment to a large number of men.

It is situated on a limestone ridge, about eight miles south of the Potomac river, twenty-three miles above Harper's Ferry, in the valley of the Shenandoah.

There is every reason to warrant the belief that the railroad facilities afforded by the continuation of the Cumberland Valley railroad to Martinsburg, will develop a large trade between the citizens of Pennsylvania, Maryland, and West Virginia, and open up new avenues for exchange of commodities. There are already other railroad enterprises contemplated, designed to connect with the Cumberland Valley railroad, which will, if carried to completion, add much to the freight and passenger traffic of that road.

Catasauqua and Fogelsville Railroad Company.

Catasauqua, Pennsylvania.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President,	1	. . .	10	$40 00	313
General superintendent,	1	. . .	10	166 66	313
Secretary and treasurer,	1	. .	10	26 66	313
Master mechanic of shops,	1	$2 50	12	. . . .	313
Road foreman,	1	. . .	10	52 00	313
Chief clerk and general freight agent,	1	. . .	10	80 00	313
Clerk,	1	. . .	10	45 00	313
Ticket agents,	1		10	52 00	313
	1	. . .	10	45 00	313
	1		10	30 00	313
Locomotive drivers,	2	2 25	12	. . . .	313
Conductor, (passenger,)	1	. .	12	58 00	313
Conductor, (freight,)	1	1 55	12	. . . .	313
Brakemen,	5	1 50	12	. . . .	313
Firemen,	1	1 90	12	. . . .	313
	1	1 80	12	. . . .	313
Watchman,	1	1 00	12	. . . .	365
Track foremen,	10	1 15	12	. . . .	313
Trackmen,	17	1 00	12	. . . .	313
Baggage-master,	1	1 63	12	. . . .	313
Carpenter,	1	1 60	12	. . . .	313
Blacksmith,	1	1 10	12	. . . .	313
Machinist,	1	1 35	12	. . . .	313
Engine wiper,	1	1 00	12	. . . .	365

CHARACTERISTICS OF ROAD.—Length of main line, from Catasauqua to Rittenhouse Gap, 20 miles; Trexlertown to terminus, 5 miles. Connects with Philadelphia and Reading Railroad, at Alburtis; Lehigh Valley Railroad, and Lehigh and Susquehanna Railroad, at Catasauqua. Gauge, 4 feet 8½ inches.

JOHN WILLIAMS, *Secretary*,
Per KEMMERER

Corning, Cowanesque, and Antrim Railway.

Fall Brook Coal Company, lessee, Watkins, New York.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President, (no salary,	1					
Chief engineer,	1			$250 00		365
General ticket agent,	1			100 00		
General superintendent,	1			300 00		
General master mechanic,	1			83 33		
General purchasing agent,	1			75 00		
Directors, (no salary,)	7					
Treasurer, (no salary,)	1					
Pay-master,	1			125 00		
Master mechanics of shops,	2			83 33		
Clerks,	8			40 00	12	
Chief telegraph operators,	2			80 00	12	
Telegraph operators,	5			23 00	12	1,825
Ticket agents,	9			45 00		
Train masters,	2			50 00	12	626
Train dispatcher,	1			65 00	13	365
Locomotive drivers,	7	$3 25	10		10	2,191
Conductors, (passenger,)	4			75 00	9	1,252
Conductors, (freight,)	3	2 00	8			939
Brakemen,	22	1 50	10		10	6,886
Firemen,	7	2 00	10		10	2,191
Watchmen,	3			40 00	12	
Track foremen,	14		10	40 00	10	4,382
Trackmen,	70	1 00	10			21,980
Baggage-masters,	4			50 00	9	
Bridge builder,	1		10	75 00	10	313
Carpenters,	5	2 00	10		10	1,565
Car builders,	10	1 87½	10		10	3,130
Blacksmiths,	6	2 00	10		10	1,878
Machinists,	10	1 87½	10		10	3,130
Moulder,	1	1 75	10		10	313
Boilermakers,	3	2 50	10		10	939
Common laborers,	15	1 12½	10		10	4,695
Switch tenders,	5	1 75	12			1,565
Painter,	1	2 00	10			313

CHARACTERISTICS OF ROAD.—Lengh of main line, Corning, New York, to Antrim, Pennsylvania, 53 miles; in Pennsylvania, 37.36 miles; Cowanesque branch, Lawrenceville Junction to Elkland, 11 miles; gauge of road, 4 feet 8½ inches; weight of rail, 60 and 62 pounds; number of wooden bridges, 6; length 586 feet; number of iron bridges, 2; length, 264 feet.

JOHN LANG, *Treasurer.*

East Broad Top Railroad and Coal Company.

Orbisonia, Huntingdon county.

	Men.	Pay per day.	Women.	Pay per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President,	1					Nine and ten hours.	Full time.
Vice president,	1						
General superintendent,	1						
Directors,	8						
Treasurer,	1						
General foreman of shops,	1				$52 50		
Road foreman,	1				47 50		
Clerks,	2				42 75		
Telegraph operators,	4				15 00 to 42 75		
Ticket agents,	8						
Depot master,	1				42 75		
Locomotive drivers,	6	$1 37 1 71 2 60					
Conductor, (passenger,)	1	1 99					
Conductors, (freight,)	4	1 07 1 99					
Brakemen,	7	1 18					
Firemen,	6	95 1 28					
Watchmen,	4	1 04					
Track foremen,	6				32 50		
Trackmen,	14	85½					
Baggage-master,	1	1 23					
Carpenters,	3	1 71 1 31 1 31					
Blacksmiths,	2	1 71 1 06					
Common laborers,	9	85½					
Engine wipers,	3	95					
Car inspectors,	2	1 06					
Car cleaner,			1	$0 50			

A. W. SIMS, *Superintendent.*

Hanover Junction, Hanover and Gettysburg Railroad Company.

Hanover, Pa.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President,	1	...	...	$83 33	
General ticket agent,	1	...	...	75 00	
General superintendent,	1	...	...	41 66	
Secretary of board of directors,	1	...	...	4 16	
Directors,	10	...	...	1 50	
Treasurer,	1	...	...	12 50	
Master mechanic of shops,	1	$2 00	8		
Road foremen,	2	...	10	45 00	
*Telegraph operators,	4				
Ticket agents,	9	...	...	16 25	
Depot-masters,	2	...	...	32 50	
Locomotive drivers,	3	...	8	55 00	
Conductor, (passenger,)	1	...	8	60 00	
Conductors, (freight,)	2	...	8	50 00	
Brakemen,	3	...	8	35 00	
Firemen.	3	...	8	35 00	
Trackmen.	18	1 00	10		
Baggage-masters,	2	...	8	35 00	
Carpenter,	1	1 25	8		
Blacksmiths,	2	1 70	8		
Machinists,	2	1 40	8		
Painter,	1	1 75	8		

* Paid by Western Union Telegraph Company.

REMARKS.—Our road extends from Hanover Junction to Gettysburg, a distance of thirty miles, and is laid with steel and iron rails, fifty-six pounds to the yard. The road has been in operation twenty-six years, in which time but one passenger was injured on the train, and that was owing entirely to his own heedlessness.

R. YOUNG, *Auditor.*

Ironton Railroad Company.

Ironton, Pa.

	Men.	Pay per day.	Average hours worked per day.	Days worked in the year.
President,*	1			
General superintendent.†				
Secretary of board of directors.‡				
Locomotive driver,	1	$3 00	10	301
Brakemen,	3	1 50	10	920
Fireman,	1	2 12	10	312
Watchman,	1	80	10	365
Track foreman,	1	2 00	10½	308
Trackmen,	7	90	10½	1,620
Carpenter,	1	1 50	10	307
Blacksmith,	1	1 85	10	307

* $250 per annum. † $1,500 per annum. ‡ No compensation.

WILLIAM ANDREWS,
Superintendent.

Greenlick Narrow-Gauge Railway Company.

Scottdale, Westmoreland county.

	Men.	Pay per day.	Hours worked per day.	Days worked in the year.
President,	1	None.		
Vice president,	1	None.		
Directors,	9	None.		
Treasurer and secretary,	1	$4 25		60
Division superintendent,	1	1 30	10	300
Locomotive driver,	1	1 75	10	300
Brakemen,	2	1 15	10	300
Carpenter and smith,	1	1 35	10	300
Common laborers,	3	1 00	10	300

CHARACTERISTICS OF ROAD.—Length, 3½ miles. Gauge, 3 feet. Rails, 24 lbs. and 30 lbs. to yard. Track laid on cross-ties, stone and slag ballast. Principally used for ore traffic.

NATHANIEL MILES,
Secretary.

Harrisburg and Potomac Railroad.

	Men.	Pay per day.	Pay of men per month.	Days worked in the year.
President,	1	. . .	$88 33	
General superintendent,	1	. . .	50 00	
Secretary of board of directors,	1			
Directors,	9			
Treasurer,	1	. . .	*	
Locomotive drivers,	1	. . .	40 00	
Conductor, (passenger and freight,)	1	. . .	40 00	
Brakeman,	1	. . .	25 00	
Fireman,	1	. . .	25 00	
Watchman,	1	. . .	15 00	
Track foremen,	2	. . .	35 00	
Trackmen,	4	$0 90		

* One and one fourth per cent. of collections.

CHARACTERISTICS OF ROAD.—Main line, Bowmansdale to Jacksonville, 25⅛ miles; sidings, 1 mile; ore branch from main line to ore banks of Philadelphia and Reading Coal and Iron Co , 2 miles.

ROBERT H. MIDDLETON, *Superintendent.*

The Jefferson Railroad Company.

P. O. box 839, New York City.

	Men.	Pay per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President,	1				
Secretary of board of directors,	1				
Directors,	12				
Treasurer,	1				
Road foreman,	1	...	$75 00	...	313
Clerks,	3	...	43 33	...	313
Telegraph operators,	3	...	52 00	...	365
Depot-masters,	8	...	55 12	...	365
Train dispatchers,	3	...	87 50	...	365
Locomotive drivers,	5	$3 60	...	...	365
Conductor, (passenger,)	1	...	45 00	...	365
Conductors, (freight,)	4	2 70	...	...	365
Brakemen,	21	1 80	...	...	365
Firemen,	6	2 12	...	...	365
Watchmen,	30	1 00	...	...	365
Track foremen,	9	...	46 28	...	313
Trackmen,	46	1 00	...	...	313
Baggage-master,	1	...	15 00	...	365
Carpenters,	27	2 00	...	...	313
Car repairers,	7	1 60	...	...	313
Blacksmiths,	2	1 68	...	...	313
Laborers,	28	1 30	...	...	313
Switch tenders,	4	1 41	...	...	365
Engine wipers,	2	1 20	...	...	365
Pumper,	1	1 60	...	...	365
Masons,	11	2 00	...	...	313

CHARACTERISTICS OF ROAD.—Length of line from Susquehanna to Carbondale, 36½ miles; length of line from Hawley to Honesdale, 9 miles. The return of employés on the Hawley branch is included in that of the New York, Lake Erie and Western Railroad Company. Gauge of line, 6 feet; weight of rail per yard, 56, 60, and 67½ pounds.

A. R. MACDONOUGH, *Secretary.*

Little Saw-Mill Run Railroad Company.

West Carson street, Pittsburgh, Pa.

	Men.	Pay per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President,	1	. .	$100 00	. . .	1 year
Secretary of board of directors,	1				
Directors,	6				
Treasurer,	1				
Clerk,	1	. .	66 66	. . .	1 year
Locomotive drivers,	2	$2 75	. . . .	10	393
Conductors, (freight,) none—engineer having charge of coal trains.					
Brakemen,	2	1 75	. . . .	10	285
Firemen,	2	2 10	. . . .	10	391
Watchman,*	1	1 60 1 45	* . .	10	325
Track foreman,	1	1 80 1 60	* . .	10	222
Trackmen,	3	1 40 1 25	* . .	10	538
Carpenters,	1 2 1	2 50 1 75 1 50	. .	10 10	†572 ‡163
Blacksmiths,	1 1	2 00 1 50	. . .	10	526
Machinists,	1 1	3 00 2 25	. . .	10	400
Common laborers—no regular number, (firemen, brakemen, tipplemen, roadmen, assistance employed when needed,)	. . .	1 25	. . . .	. . .	1,301
Tipple foreman,	1	2 00	. . . .	10	190
Tipplemen,	8	1 75	. . . .	10	943

* Rate changed during year. † Regular employees. ‡ Assistance hired.

Remarks.—Our road extends from Pittsburgh to Banksville, a distance of three miles used for transportation of bituminous coal from mines at Banksville to the Ohio river. Passenger travel is given over to the Pittsburgh Southern Railroad Company. Road is laid on coal slack; stone and clay bed and oak cross ties; four wooden bridges, total length, including trestle approaches, about 2,100 or 2,200 feet; gauge of road, 4 feet 8½ inches and 3 feet; our coal trains using the wide gauge and the Pittsburgh Southern Railroad Company's trains using the narrow gauge; weight of rail, 52, 53, and 56 pounds, (per yard;) steel and iron. Our labor is mixed, in consequence of employés at specified work being required to do laboring work, as noted above, opposite "common laborers;" the number of days given is the entire time worked by all hands at that particular occupation; the 1,301 days' labor includes laying one additional rail very nearly the whole length of our road, for use of Pittsburgh Southern Railroad Company.

JOHN S. HOLLINGSHEAD,
President.

Lake Shore and Michigan Southern Railway.

Cleveland, Ohio.

	Men.	Pay per day.	Average pay of men per month.	Hours worked per day.	Days worked in the year.
Directors,	3				
Division superintendent,	1	. . .	$180 00	. . .	365
General foremen of shops,	3	. . .	91 00	. . .	312
Road foremen,	31	. . .	55 00	. . .	312
Clerks,	25	. . .	43 50	. . .	312
Messengers,	2	. . .	18 50	. . .	312
Telegraph operators,	16	. . .	46 50	. . .	312
Ticket agents,	3	. . .	54 00	. . .	365
Depot-masters,	2	. . .	94 50	. . .	365
Station agents,	17	. . .	61 50	. . .	365
Train dispatchers,	2	. . .	92 00	. . .	365
Locomotive drivers,	48	$3 20			
Conductors, (passenger,)	5	. . .	77 50	. . .	312
Conductors, (freight,)	10	. . .	67 00	. . .	312
Brakemen,	28	. . .	42 50	. . .	312
Firemen,	33	1 60			
Watchmen,	33	. . .	34 00	. . .	365
Car-sealers,	4	. . .	49 50	. . .	312
Trackmen,	8	1 10			
Baggage-masters,	15	. . .	43 00	. . .	365
Car recorders,	5	. . .	48 00	. . .	365
Blacksmiths,	4	1 67			
Machinists,	7	1 75			
Target-men,	4	. . .	38 00	. . .	365
Hostlers,	2	2 05			
Yard-masters,	8	. . .	81 50	. . .	365
Common laborers,	266	1 05			
Switch-tenders,	23	. . .	32 50	. . .	365
Flagmen,	7	. . .	29 00	. . .	365
Wipers,	9	1 05			
Yard conductors,	10	. . .	57 50	. . .	312
Yard brakemen,	40	. . .	48 50	. . .	312

CHARACTERISTICS OF ROAD.—See annual report, 1877.

C. P. LELAND, *Auditor.*

Lykens Valley Railroad and Coal Company, (Leased.)—Summit Branch Railroad Company.

Lykens, Dauphin county, Pa.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Hours worked per day.	Days worked in year.
President	1					
Vice President,	1					
Secretary of board of directors,	1					
Directors,	11					
Treasurer,	1					
Division superintendent,	1	...	...	$180 00		
Master mechanic of shop,	1	...	...	90 00	8	313
Road foreman,	1	...	...	67 50	10	313
Clerk,	1	...	...	75 00	10	313
Telegraph operators,	4	...	...	10 00 to 40 50	10	1,252
Ticket agents,	4	...	...	20 00 to 35 00	10	1,252
Train master,	1	...	...	67 50	12	313
Train dispatcher,	1	...	...	56 70	10	313
Locomotive drivers,	5	$3 00	12	...	...	877
Conductor, (passenger,)	1	...	...	60 75	9	313
Conductors, (freight,)	2	1 67	12	...	...	495
Brakemen,	7	1 58	12	...	...	1,385
Firemen,	3	1 62	12	...	...	799
Watchmen,	4	...	...	36 00 to 44 55	10	1,252
Track foremen,	4	...	...	43 20	10	1,252
Trackmen,	20	1 30	...	...	9	4,621
Carpenters,	4	1 46	8	...	...	779
Blacksmiths,	4	1 62	8	...	...	966
Machinists,	4	1 62	8	...	...	868
Switch tender,	1	1 30	10	...	...	313
Painter,	1	1 30	8	...	...	258
Weighmasters,	2	...	...	45 00 and 49 50	10	626
Car inspectors,	2	1 82	10	...	...	508

CHARACTERISTICS OF ROAD.—Road is operated for the purpose of getting Lykens Valley coal to market. Also do a small passenger and general freight business. Road extends from Millersburg, Pa., to Williamstown Pa. Gauge of road, 4 feet 9 inches. Single track.

R. C. PEEBLES,
Superintendent.

Ligonier Valley Railroad Company—Ligonier, Westmoreland County, Pa.

	Men.	Pay per day.	Hours worked per day.	Days worked in the year.
President,	1			
General superintendent,	1	$3 00	10	300
Secretary of board of directors,	1			
Directors,	7			
Treasurer,	1			
Ticket agent and depot master,	1	1 00	10	300
Locomotive driver,	1	2 00	10	300
Conductor, (passenger and freight,)	1	2 00	10	300
Brakeman,	1	1 00	10	300
Fireman,	1	1 00	10	300
Watchman,	1	1 00	10	300
Track foreman,	1	1 00	10	300
Trackmen,	6	1 00	10	300

CHARACTERISTICS OF ROAD.—Our road connects with Pennsylvania railroad at Latrobe street, and terminates at Ligonier, Pa., being a narrow gauge, (3 feet,) No. 35 rail, and road is 10⅞ miles in length; 9 stations. Freight consists principally of building stone, lumber, railroad ties, grain, general farm products, bark, stock, &c., in full car loads, which is shipped on Pennsylvania Railroad car bodies, and transferred and run on to their trucks without rehandling freight. The road has been in the contractor's hands during the last year; but during next year a complete and full account will be kept and rendered at end of year. Regret the delay in rendering this partial report, but it could not be avoided.

JOHN MURDOCK, *Secretary and Treasurer.*

Lawrence and Evergreen Railroad Company.

86 Wood street, Pittsburgh, Pa.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President,	1				
Directors,	6				
Treasurer,	1				
Locomotive driver,	1	$2 20	12	$68 00	340
Watchman,	1	. . .	15	35 00	340
Track foreman,	1	1 50	10	. . .	293
Common laborer,	1	1 00	10	. . .	90

CHARACTERISTICS OF ROAD.—Narrow gauge, 3 feet; about three miles long; run but one locomotive; have no freight traffic; run from Bennett station, on West Penn railroad, to Evergreen.

A. C. McCALLAM, *Secretary and Treasurer.*

Monongahela Inclined Plane Company.

Pittsburgh, Pa.

	Men.	Pay per year.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President,	1	$200 00			
Secretary of board of directors and treasurer,	1	200 00			
Directors,	7				
Road-master,	1	....	$50 00	..	365
Conductors, (passenger,)	2	....	60 00	...	365
Engineers,	2	...	75 00 70 00	..	365
Firemen and watchmen,	2	....	50 00	...	365

REMARKS.—The plane is 640 feet long, starting from Canon street, in the Thirty-third ward, of Pittsburgh, and extending at an angle of 35°, to Grand View avenue, in the Thirty-second ward; height of elevation, 370 feet. The cars are run by two stationary engines, located, with their boilers, at the top of the hill. The lower portion of the plane, for a distance of 280 feet, is built on an iron-plate girder-bridge, crossing the Pittsburgh, Cincinnati and St. Louis railway, and from the bridge to the top of the hill, on wooden trestle on stone foundations.

JOHN L. AWL,
Secretary and Treasurer.

Philadelphia and Reading Railroad.

227 South Fourth street, Philadelphia.

	Men.	Average pay per day.	Boys.	Average pay per day.	Women.	Average pay per day.	Average pay of men per month.	Pay of women per month.	Pay of boys per month.
President,	1						$1,050 00		
General solicitor,	1						333 33		
General manager,	1						625 00		
Chief engineer,	1						450 00		
Supt. of transportation,	1						225 00		
General ticket agent,	1						191 25		
Real estate agent,	1						191 25		
Engineer of machinery,	1						300 00		
Comptroller and assistant comptroller,	2						351 77		
General purchasing agent,	1						360 00		
Secretary board of directors	1						300 00		
Auditors,	2						175 36		
Directors,	6						No pay.		
Treasurer and assistant treasurer,	2						459 37		
Pay-masters,	2						228 38		
General freight agent,	1						500 00		
Division superintendents,	5						100 00@212 50		
Resident engineers,	5						101 00@255 00		
Assistant engineers,	5						60 00@ 81 00		
Master mechanics of shops,	8						72 90@121 50		
General foremen of shops,	56						48 50@121 50		
General agents,	5						101 25@208 33		
Traveling engineer,	1						90 00		
Chief clerk of motive power	1						113 40		
Road foremen,	7						64 75@ 97 25		
Clerks on line of road,	263		7				9 00@ 72 90		$10 80@21 15
Clerks in general office,	82		2				21 38@159 38		18 00
Superintendent of telegraph	1						150 00		
Telegraph operators,	193		13		1		20 00@ 85 00	$15 00	9 00@17 10
Agents,	255				6		3 15@121 50	9 00 @ 20 00	
Depot-masters,	4						45 00@ 52 65		
Train-masters,	5						60 75@ 68 85		
Train dispatchers,	62						34 02@105 00		
Locomotive drivers,	379						68 25@ 81 00		
Conductors, (passenger,)	64	$1 94@3 15							
Conductors, (freight and coal,)	265	1 13@2 79							
Brakemen,	1021	1 10@2 20							
Firemen,	374	1 00@1 85							
Watchmen,	534						21 15@ 48 60		
Track foremen,	48						40 50@ 81 00		
Trackmen,	1128	1 10@1 80							
Baggage-masters,	55						17 10@ 40 50		
Sill, mine, & scale inspectors	6						45 00@101 25		
Bridge builders,	30	1 60@2 50							
Carpenters and car builders	596	1 26@2 21	32	$0 50@1 50					
Stationary engineers,	54	1 22@2 57	2	58					
Blacksmiths,	195	1 10@2 93	9	50@1 50					
Machinists,	435	1 26@2 34	89	50@1 50					
Moulders,	41	1 44@2 50	8	50@1 50					
Boiler-makers,	60	1 35@2 21	11	50@1 50					
Tinners,	27	1 44@2 03	7	50@1 50					
Plumbers,	3	1 00@2 05							
Coppersmiths,	9	1 62@2 43	1	1 00					
Common laborers,	929	99@1 77	38	50@1 17					
Switch-tenders,	98	1 22@2 12							
Depot hands,	161	1 00@1 62	12	50@ 85	6	$0 90 @ 1 26			
Painters,	57	1 10@2 25	6	50@1 00					
Masons,	35	1 10@2 50							
Express messengers,	15						25 20@ 64 80		
Teamsters and stablemen,	115		16				12 00@ 69 30		14 40
Policemen,	28						20 00@ 70 00		
Telegraph repairmen,	12						37 95@ 63 00		
Office and car cleaners,	16	86@1 44			70	95 @ 1 35			

Roads worked or leased by the company, and their length, (not including sidings and laterals,) viz: Philadelphia and Chester, $14\frac{3}{10}$ miles; Philadelphia, Germantown and Norristown, $29\frac{7}{10}$ miles; Chestnut Hill, 4 miles; Chester Valley, $21\frac{1}{2}$ miles; Perkiomen, $38\frac{3}{5}$ miles; Pickering Valley, $11\frac{3}{10}$ miles; Colebrookdale, $12\frac{4}{5}$ miles; East Pennsylvania, 36 miles; Allentown, $4\frac{1}{2}$ miles; Berks and Lehigh, $41\frac{1}{5}$ miles; Little Schuylkill, $28\frac{1}{5}$ miles; Mine Hill and Schuylkill Haven, $52\frac{4}{5}$ miles; Mount Carbon and Port Carbon, $2\frac{1}{2}$ miles; Mill Creek and Mine Hill, $3\frac{4}{5}$ miles; Schuylkill Valley, 11 miles; East Mahanoy, $10\frac{7}{10}$ miles; Catawissa and Williamsport, $92\frac{3}{5}$ miles.

FRANKLIN B. GOWEN, *President.*

Reading and Columbia Railroad Company.

No. 227 South Fourth street, Philadelphia.

	Men.	Average pay per day.	Boys.	Average pay of men per month.	Pay of boys per month.	Hours worked per day.	Days worked in the year.
President,	1	...	...	$166 67			
Superintendent,	1	...	...	125 00	...	12	310
Secretary,	1	...	...	30 38	...	7	300
Directors,	12						
Treasurer,	1	...	...	40 50	...	7	300
Master mechanic of shops,	1	...	...	75 00	...	10	310
Road foremen,	2	...	...	53 00	...	10	310
Clerks,	3	...	1	36 67	$8 00	10	310
Telegraph operators,	6	...	...	28 33	...	10	310
Ticket and freight agents,	22	...	...	38 68	...	10	310
Depot-masters,	3	...	...	32 67	...	10	310
Train-master,	1	...	...	65 00	...	10	310
Train dispatchers,	2	...	...	35 50	...	10	310
Locomotive drivers,	10	$2 80	...	...	...	10	310
Conductors, (passenger,)	4	2 52	...	...	...	10	310
Conductors, (freight,)	5	2 07	...	...	...	10	310
Brakemen,	26	1 66	...	...	...	10	310
Firemen,	10	1 73	...	...	...	10	310
Watchmen,	11	...	...	26 50	...	10	310
Track foremen,	24	1 20	...	...	...	10	310
Trackmen,	25	1 10	...	...	...	10	310
Baggage-masters,	4	1 75	...	...	...	10	310
Bridge builders,	1	...	...	50 00	...	10	310
	2	1 55	...	...	...	10	310
Carpenters,	2	1 40	...	...	...	10	310
Blacksmith,	1	1 90	...	...	...	10	310
Blacksmith, (helper,)	1	90	...	...	...	10	310
Machinist,	1	1 80	...	...	...	10	310
Common laborers,	2	...	...	27 00	...	10	310
	8	1 18	...	...	...	10	310
Painter,	1	1 80	...	...	...	10	310
Stone mason,	1	1 70	...	...	...	10	310
Stone mason, (helper,)	1	1 10	...	...	...	10	310

CHARACTERISTICS OF ROAD.—See annual report to Secretary of Internal Affairs.

HOWARD HANCOCK, *Secretary.*

Philadelphia and Baltimore Central Railroad Company.

Broad street and Washington avenue, Philadelphia.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President,	1				
General master mechanic,	1	. . .	. . .	$166 66	
Directors,	5				
Road foremen,	2	. . .	. . .	125 00	
Clerks,	6	. . .	.	50 00 and 60 00	
Telegraph operators,	2	. . .	10	50 00	365
Ticket agents,	31	. . .	. . .	50 00	365
Train dispatcher,	1		. . .	100 00	365
Locomotive drivers,	6	$3 00	10	. . . .	313 and 365
Conductors, (passenger,)	3	2 50 and 2 75	10	. . . .	313 and 365
Conductors, (freight,)	2	2 50	10	. . . .	313
Brakemen,	9	1 50	10	. . . .	313 and 365
Firemen,	6	1 65 and 1 75	10	. . . .	313 and 365
Watchman,	1	. . .	. . .	50 00	365
Track foremen,	12	. . .	10	45 00	313
Trackmen,	60	1 00	10	. . . .	313
Baggage-masters,	3	1 75	10	. . . .	313 and 365
Carpenters,	3	2 65 and 2 25	10	. . . .	313
Car builders,	5	2 25	10	. . . .	313
Blacksmiths,	2	2 25	10	. . . .	313
Machinists,	4	2 25	10	. . . .	313
Common laborers,	6	1 00	10	. . .	313
Painters,	2	2 50	10	. . . .	313

CHARACTERISTICS OF ROAD.—Length of road laid in Pennsylvania, $36\frac{3}{4}$ miles; length of sidings, 6.50 miles; gauge, 4 feet $8\frac{1}{2}$ inches; length of Chester Creek Railroad, leased and operated by this company, 7.25 miles; sidings, 2; guage, 4 feet $8\frac{1}{2}$ inches; iron and steel rail; stone ballast; and dirt foundation.

HENRY WOOD, *President.*

Philadelphia, Wilmington and Baltimore Railroad Company.

Philadelphia, Penna.

	Men.	Pay per day.	Boys.	Pay per day.	Women.	Pay per day.	Average hours worked per day.	Pay of men per month.	Pay of women per month.	Pay of boys per month.
President,	1									
Vice president,	1									
Chief engineer,	1									
General ticket agent,	1									
General superintendent,	1									
General master mechanic,	1									
General freight agent,	1									
Master of transportation,	1									
Treasurer and secretary board of directors,	1									
Assistant treasurer,	1									
Paymaster,	1									
Foremen of shops,	11						9	$92 72		
Road foremen, (sup'visors,)	22						10	69 89		
Clerks,	99		3				9	64 56		$25 83
Telegraph operators,	39						10	52 52		
Ticket agents,	7							56 90		
Depot masters,	2							137 50		
Train dispatcher,	1							150 00		
Locomotive drivers,	75						10	88 23		
Conductors, (passenger,)	20							83 25		
Conductors, (freight,)	17							65 15		
Brakemen,	71							45 69		
Firemen,	60		16				10	49 98		26 00
Watchmen,	40						12	45 12		
Track foremen, (section,)	24	$1 46					10			
Trackmen,	191	1 14					10			
Baggage masters, (train,)	14							56 34		
Baggage masters, (station,)	9						10	50 28		
Bridge builders,	42	2 12					10			
Carpenters.	34	2 00					9			
Car builders,	50	2 03	6	$0 76			9			
Blacksmiths,	26	2 18					9			
Machinists,	42	2 02	8	82			9			
Pattern makers,	1	2 40					9			
Boiler makers,	6	2 02	1	78			9			
Tinners,	7	1 97					9			
Coppersmith,	1	3 25					9			
Common laborers,	179	1 35					10			
Switch tenders,	46						12	39 58		
Painters,	41	2 00	1	1 00			9			
Flagman, (inc. signalmen,)	50						13	30 70		
Locomotive cleaners,	32	1 12					10			
Car cleaners,	21	1 40			11	92c.	10			
Bridge keepers,	18						12	49 44		
Car oilers,	7	1 67					10			
Car inspectors,	7	1 90					11			
Upholsterers,	2	2 35					9			
Ladies' maid,					6		10		$21 33	
Messengers,			14				10			21 55
Porters,	17						11	32 97		
Station agents,	28				3				16 67	
Shifting conductors,	16						11	61 88		
Shifting brakemen,	43						11	41 56		
Stone masons,	7	2 00					10			

H. F. KENNEY, *Superintendent.*

Pittsburgh, Virginia and Charleston Railway Company.

Pittsburgh, Penna.

	Men.	Pay per day.	Average hours worked per day.	Days worked in the year.
President,	1	. . .	8	On an average, about 339.
Vice president,	1	. . .	8	
Chief engineer,	1	. . .	8	
General ticket agent,	1	. . .	8	
General superintendent,	1	. . .	8	
Secretary of board of directors,	1	. . .	8	
Directors,	7			
Treasurer,	1	. . .	8	
Master mechanic of shops,	1	$3 00	10	
Road foreman,	1	2 80	10	
Telegraph operators and ticket agents,	13	93	12	
Train dispatcher,	1	2 16	12	
Locomotive drivers,	5	2 44	12	
Conductors, (passenger,)	2	2 40	10	
Conductors, (freight,)	3	1 95	12	
Brakemen,	6	1 50	12	
Firemen,	5	1 50	12	
Watchmen,	2	93⅓	12	
Track foremen,	6	1 50	10	
Trackmen,	28	1 00	10	
Baggage masters,	2	1 80	10	
Carpenters,	4	1 95	10	
Blacksmiths,	2	1 57	10	
Machinist,	1	2 00	10	

CHARACTERISTICS OF ROAD.—Line extends from Pittsburgh to Monongahela City, about 30 miles; along the Monongahela river. Gauge, 4 feet 9 inches. Oak and chestnut cross-ties, broken stone ballast.

All labor on line and shops calculated at 30 days to the month.

D. P. CORWIN,
Treasurer.

New York, Lake Erie and Western Railroad Company—Susquehanna Division.

P. O. box 839, New York City.

	Men.	Pay per day.	Boys.	Pay per day.	Average hours worked per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
Master mechanic of shops,	1					$200 00	10	308
General foreman of shops,	1					135 00	10	308
Traveling engineer,	1					112 50	10	313
Clerks,	8					45 00 to 112 50	10	308
Telegraph operator,	1					54 00	12	365
Telegraph messengers,*			2				12	365
Ticket agent,	1					45 00	12	365
Depot-masters,	2					112 50 54 00	10	365
Train dispatchers,	2					45 00 31 50	12	365
Locomotive drivers—switching,	6	$2 92			12			365
Firemen—switching,	6	2 00			12			365
Watchmen,	10	1 70			12	36 00	12	365
Track foremen,	1					51 00	10	313
	3					45 00		
	1					40 50		
Trackmen,	47	1 00			10			313
Baggage-masters,	2					40 50	12	365
Carpenters,	12	2 10			8			308
Blacksmiths,	19	2 20			8			308
Machinists,	118	2 20			8			308
Moulders, (iron,)	33	2 25			8			308
Boiler makers,	16	2 25			8			308
Tinners,	2	2 35			8			308
Coppersmiths,	3	2 30			8			308
Common laborers,†	1					36 00	10	365
	3	1 26			10			313
	33	1 40			8			308
Switch tenders,	4	2 03			12			365
	17	1 80						
Painters,	4	2 25			8			308
Painters, (laborer,)	1	1 40			8			308
Stack inspector,	1	1 40			11			365
Car sealers,	3	1 35					12	365
House cleaner,‡					10			365
Caller,	1					20 25	12	365
Draughtsmen,	2					117 00 55 00	10	308
Time keeper,	1					63 00	10	308
Check keepers,	2	1 40					10	308
Department foremen,	11	2 80			10			308
Machinists, (apprentices,)			9	$1 40	8			308
Machinists, (helpers,)	8	1 60			8			308
Blacksmiths, (apprentice,)			1	1 80	8			308
Blacksmiths, (helpers,)	28	1 40			8			308
Furnacemen,	4	3 55			8			308
Furnacemen, (helpers.)	17	1 80	4	80	8			308
Boiler makers, (apprentice,)			1	1 20	8			308
Boiler makers, (helpers,)	13	1 40			8			308
Spring maker,	1	2 40			8			308

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* Pay per month, $15 00.

† Woman, 1; pay per day, $2 00. Worked 52 days the year.

‡ Woman, 1; pay per month, $15 00.

New York, Lake Erie and Western Railroad Company—Susquehanna Division.—*Continued.*

	Men.	Pay per day.	Boys.	Pay per day.	Average hours worked per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
Spring maker, (helper,)	1	$1 40	...	...	8	....	...	308
Brass moulders,	2	2 20	...	...	8	....	...	308
Casting cleaners, helpers, &c.,	16	1 40	...	...	8	....	...	308
Coppersmiths and tinners, (helpers,)	2	1 20	...	...	8	....	...	308
Stationary engineers,	3	2 10	...	...	10	....	...	308
Stationary firemen,	3	1 50	...	...	10	....	...	308
Oilman—machinery,	1	1 80	...	...	10	....	...	308
Passenger and freight car repairers,	7	1 40	...	...	8	....	...	308
Car inspectors,	5	1 40	...	...	12	....	...	365
Car sweeper and cleaner,	1	1 30	...	...	8	....	...	365
Iron moulders, (apprentice.)	...	...	1	$1 20	8	....	...	308
Tending boilers for heating,	3	2 00	...	...	12	....	...	165
Mason,	1	1 80	...	...	10	....	...	308
Gas makers,	2	2 00	...	...	12	....	...	365
Store-keepers,	2	...	...	...	.	$75 00 49 50	10	308
Night foreman,	1	2 70	...	...	11	....	...	365
Supply clerk and E. and F. time keeper,	1	...	...	...	...	63 00	10	313
Wipers,	17	1 20	...	...	8	....	...	365
Taking care of engines,	3	2 10	...	...	10	....	...	365
Boiler cleaner,	1	1 60	...	...	10	....	...	313
Sand dryer,	1	1 30	...	...	11	....	...	365
Firing up engines,	2	1 40	...	...	10	....	...	365
Night and day callers,	2	1 40	...	...	11	....	...	365
Sweepers,	2	1 40	...	...	10	....	...	365
Cleaning ash pits,	3	1 40	...	...	10	....	...	365
Tending turn-table,	4	1 40	...	...	11	....	...	365
Wooding and coaling engines,	8	1 40	...	...	10	....	...	365
Distributing oil and waste,	1	1 40	...	...	10	....	...	365
Steam and gas fitters,	2	2 20	...	...	8	....	...	308
Pattern makers,	5	2 40	...	...	8	....	...	308
Pattern makers, (apprentice,)	.	...	1	1 60	8	....	...	308
Pattern makers, (helper,)	1	1 50	.	...	8	....	...	308

A. R. MACDONOUGH,
Secretary.

New York, Lake Erie, and Western Railroad in Pennsylvania—Delaware Division.

	Men.	Pay per day.	Pay of men per month.	Days worked in the year.
Clerks,	6	. .	$48 60	313
Telegraph operators,	6	. . .	43 50	365
Depot-masters,	10	. . .	44 75	365
Locomotive drivers,	9	$2 70	. . . .	365
Conductor, (passenger,)	1	.	90 00	365
Conductor, (freight,)	1	2 70	. . . .	365
Brakemen,	5	1 80	. . . .	365
Firemen,	11	2 12	. . . .	365
Watchmen,	40	1 00	. . . .	365
Track foremen,	10	. . .	45 90	313
Trackmen,	74	1 00	. . . .	313
Baggage-masters,	4	1 28	. . . .	365
Car repairers,	8	1 60	. . . .	313
Blacksmiths,	2	1 68	. . . .	313
Laborers,	10	1 30	. . . .	313
Switch tenders,	6	1 51	. . . .	365
Engine wipers,	3	1 20	. . . .	365
Warehouseman,	1	1 26	. . . .	313

B. THOMAS, *Division Sup't.*

McKean and Buffalo Railroad.

	Men.	Average hours worked per day.	Pay of men per month.	Hours worked per day.	Days worked in the year.
President,	1	12	. . .	12	320
General ticket agent,	1	12	. . . .	12	320
Secretary board of directors,	1	12	. . . .	12	320
Treasurer,	1	12	. . .	12	320
Superintendent,	1	12	. . . .	12	320
Telegraph operators and ticket agents,	3	12	$40 00	12	320
Locomotive driver,	1	12	90 00	12	320
Conductor, (passenger and freight,)	1	12	65 00	12	320
Brakemen,	3	12	43 33⅓	12	320
Fireman,	1	12	50 00	12	320
Watchman,	1	All night.	40 00	12	320
Track foremen,	2	10	40 00	10	320
Blacksmith,	1	12	55 00	12	320
Common laborers,	8	per day:	1 20	10	320

CHARACTERISTICS OF ROAD.—Length main line of road laid from Larabee to Clermont, $22\frac{15}{100}$ miles; length of sidings, $4\frac{65}{100}$ miles; gauge of road, 4 feet $8\frac{1}{2}$ inches; weight of rail per yard on main track, 62 pounds; main line is laid with steel rails, on foundation of timber cross ties, ballasted with gravel; engine-houses, 2; engines, 2; number wooden bridges, 19; total length in feet, 1,323; culverts, 54; total length in feet, 151; number stations—passenger, 7; freight, 2; number water stations, 4; passenger coaches, 2; freight cars, (gondolas,) 54. Business of road most exclusively coal.

L. GODDEN, *Superintendent.*

Sharon Railway—Sharon, Pa.

President, (no salary,) 1; secretary of board of directors, 1—monthly wages, $25 00; directors, (no salary,) 7; treasurer, 1—monthly wages, $50 00. Hours and days of labor irregular, no regulation on the subject.

REMARKS.—The railroad and property of the Sharon railway are leased to the Atlantic and Great Western Railroad Company, and the railroad is operated by the receiver of the railroad and property of the latter company. Reference is hereby made to said receiver for information required, so far as not above furnished.

GEORGE BOYCE, *President.*

Somerset and Mineral Point Railroad.

Somerset, Pennsylvania.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.
President,	1			
General manager,	1		10	$65 00
Directors,	12			
Treasurer,	1			
Road foreman,	1		10	35 00
Locomotive driver,	1		10	40 00
Conductor, (passenger,)	1		10	
Conductor, (freight,)	1		10	
Fireman,	1		10	35 00
Watchman,	1		10	35 00
Trackmen,	6	$0 90	10	

CHARACTERISTICS OF ROAD.—I have marked opposite "conductors, (passenger,") and "conductors, (freight,") but omitted salary, for the reason that the general manager acts in the capacity of the above.

W. H. SANNER, *Superintendent.*

State Line and Sullivan Railroad Company.

Towanda, Pennsylvania.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President, (no salary,)	1				
General superintendent,	1	. .	10	$133 33	Full time.
Secretary board of directors,	1	. . .	10	100 00	Full time.
Directors,	9				
Treasurer,	1	. . .	10	166 66	Full time.
Road foreman,	1	. . .	10	. . . . .	Full time.
*Depot-masters,	6	. . .	10	6 00 to 40 00	Full time
Locomotive driver,	1	$3 00	10	. . . .	Full time.
Conductor, (passenger,)	1	. . .	10	70 00	Full time.
Brakemen,	3	1 50	10	. . . .	Full time.
Fireman,	2	2 00	10	. . . . .	Full time.
Track foremen,	3	. . .	10	35 00	Full time.
Trackmen,	4	1 00	10	. . . . .	Full time.

* Our depot-masters are telegraph operators also.

CHARACTERISTICS OF ROAD.—One main line, 25 miles in length, including sidings; gauge, 4 feet 8½ inches, with iron rail weighing 50 and 56 pounds per yard; 10 wooden bridges, aggregate length, 655 feet; 2 wooden trestles, aggregate length, 200 feet; 7 passenger and freight stations; 3 wood and water stations; the track is ballasted with slate and coal dust; the ties are either hemlock, beech, oak, or chestnut; 1 locomotive weighing over 30 tons; 2 first class passenger cars; 1 baggage, mail, and express car.

WILLIAM C. TOWNSEND,
Treasurer.

Tioga Railroad Company.

Elmira, New York.

	Men.	Pay per day.	Pay of men per month.	Hours worked per day.
President,	1	. . . .	$425 00	
General ticket agent,	1	. . . .	208 33	
General superintendent,	1	. . .	270 00	
General master mechanic,	1	. . . .	135 00	
Directors,	12			
Secretary, treasurer, and vice president,	1	. . . .	83 33	
Paymaster,	1	. . . .	55 00	
General foremen of shops,	1	. . . .	90 00	
Chief clerk of motive power,	1	. . . .	90 00	
Road foreman,	1	. . . .	70 00	
Clerks,	3	. . . .	53 33	
Telegraph operators,	10	. . . .	27 25	
Depot masters,	7	. . . .	30 00	
Train dispatcher,	1	. . . .	75 00	
Locomotive drivers,	16	$3 50		
Conductors, (passenger,)	3	.	75 00	
Conductors, (freight,)	10	2 50		
Brakemen,	33	1 62½		
Firemen,	16	1 80		
Watchmen,	4	1 30		
Track foremen,	15	. . . .	40 00	
Trackmen,	75	1 00		
Baggage masters,	3	1 50	60 00	
Carpenters,	6	1 87½		
Car builders,	6	1 62½		
Blacksmiths,	5	2 30		
Machinists,	9	2 30		
Boiler makers,	1	3 00		
Common laborers,	16	1 25		
Painters,	1	2 70		

CHARACTERISTICS OF ROAD.—Track laid with three rails, making both 6 feet and 4 feet 8½ inches gauge. Principal business, transportation of coal.

L. H. SHATTUCK, *Superintendent.*

Wilmington and Northern Railroad.

Coalsville, Pa.

	Men.	Pay per day.	Average hours worked per day.	Pay of men per month.	Days worked in the year.
President,	1	. . .	. . .	$166 67	
General ticket agent,	1	. . .	. . .	138 75	
General superintendent,	1	. . .	. . .	166 67	
General master mechanic,	1	. . .	. . .	80 00	
Treasurer, secretary, and paymaster,	1	. . .	. . .	138 75	
Division superintendents,	2	. . .	. . .	75 00	
Clerks,	2	. . .	. . .	60 00	
Chief telegraph operator,	1	. . .	. . .	50 00	
Telegraph operators and ticket agents,	22	. . .	. . .	40 00	
Train dispatcher,	1	. . .	. . .	93 25	
Locomotive drivers,	8	$2 55	10	. . . .	308
Conductors, (passenger,)	3	2 14	10	. . . .	308
Conductors, (freight,)	2	2 14	10	. . . .	308
Brakemen,	7	1 40	10	. . . .	308
Firemen,	5	1 50	10	. . . .	308
Watchmen,	3	1 50	12	. . . .	365
Track foremen,	19	1 25	9	. . . .	308
Trackmen,	39	1 10	9	. . . .	308
Baggage masters,	2	1 40	10	. . . .	308
Bridge builders,	20	1 50	10	. . . .	150
Carpenters and car builders,	7	1 80	9	. . . .	308
Blacksmiths,	2	1 60	9	. . . .	308
Machinists,	2	2 00	9	. . . .	308
Boiler makers,	1	1 80	9	. . . .	308
Common laborers,	3	1 25	. . .	. . . .	308
Painters,	1	1 60	. . .	. . . .	200

CHARACTERISTICS OF ROAD.—The road extends from Wilmington, Delaware, to Reading, Pennsylvania, which includes the branch from Birdsboro' to near Reading, Pennsylvania.

P. S. ERMOLD,
Secretary and Treasurer.

West Chester and Philadelphia Railroad Company.

3100 Chestnut street, Philadelphia.

	Men.	Pay per day.	Boys.	Women.	Pay of men per month.	Pay of women per month.	Pay of boys per month.
President,	1				$125 00		
Auditor and genl. ticket agent,	1				125 00		
General superintendent,	1				291 66		
Master mechanic,	1				100 00		
Master carpenter,	1				125 00		
Secretary board of directors,	1				41 66		
Treasurer,	1				150 00		
Road foreman,	1				65 00		
Clerks,	1			1	40 00	$40 00	
Clerks in general office,	4				42 00 to 75 00		
Chief telegraph operator,	1					50 00	
Telegraph operators,	3		1		35 00		$10 00
Freight and ticket agents,	15			5	41 00	24 00	
Train master,	1				75 00		
Freight dispatcher,	1				75 00		
Locomotive drivers,	8	$2 93					
Conductors, (passenger,)	5	2 50					
Conductor, (freight,)	1	2 45					
Brakemen,	10	1 55					
Firemen,	8	1 71					
Watchmen,	3				40 00		
Track foremen,	7	1 62					
Trackmen,	30	1 16					
Baggage masters,	4	1 75					
Carpenters,	6	2 08					
Blacksmiths,	4	2 13					
Machinists,	8	2 13					
Coppersmith,	1	2 25					
Common laborers,	20	1 52		2	32 50		
Switch tenders,	5	1 42					
Painters,	2	2 25					
Car inspector,	1	1 60					

REMARKS.—Road operated 36 miles; business one third freight and two thirds passenger.

A. D. SHARPLES, *Auditor.*

Peach Bottom Narrow-Gauge Railroad.

York, Pa.

	Men.	Pay per day.	Women.	Average hours worked per day.	Pay of men per month.	Pay of women per month.	Days worked in the year.
President,	1						
Vice president,	1						
Secretary of board of directors,*	1						
Treasurer,	1						
Division superintendents,†	2						
Clerk,	1	...	...	10	$25 00		
Train dispatcher,	1	...	...	10	30 00		
Locomotive drivers,	3	...	...	12	65 00		
Conductors, (passenger,)	2	...	...	12	50 00		
Conductor, (freight,)	1	...	...	12	40 00		
Brakemen,	4	...	...	12	25 75		
Firemen,	3	$1 27½	...	14	33 02		
Track foremen,	8	1 05	...	10	35 00		
Trackmen,	24	90	...	10			
Baggage master,	1	...	...	11	40 00		
Blacksmith,	1	1 20	...	10			
Cleaner,	1	1 15	...	10	...	...	365
Car and office cleaner,	...	...	1	3	...	$12 00	
Car inspector,	1	1 25	...	10			

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* $1,000 a year.

† $860 a year.

Remarks.—The secretary of the board acts as treasurer and general freight and ticket agent of the middle division. Superintendent of eastern division acts as assistant treasurer and paymaster of his division. Superintendent of middle division acts as engineer and road master.

Length of main line of road, 60 miles; length of main line of road, 55 miles laid; length of main line of road in Pennsylvania, 60 miles; single track; gauge of road, 3 feet; weight of rail, 30 lbs. per yard; track is laid on gravel and broken stone ballast.

Middle division, from York to Delta, now operated, and the balance of 5 miles, to Susquehanna river, graded in part. Eastern division, from river to Oxford, in Chester county, Pa.

LUMBER.

Our lumber report is very poor. The greater number of returns received, show that the business for 1878 was very dull. This is an industry that cannot be properly reached by correspondence. The few returns given herewith, are selected from the bulk, as showing the best results.

ELK COUNTY.

Wilcox Lumber Company—Jackson S. Schultz, Proprietor.

Wilcox, Elk county.

Establishment located in Elk county.

Whole number of persons employed, 50, a part, only, of the year.

Amount of capital employed in business, usually $300,000.

Amount paid annually for wages of employés: The current year working only part of the time, probably $10,000.

Amount paid for materials used in business: This year about $6,000.

ANNUAL PRODUCT.		VALUE.
White pine lumber, feet,	100,000	$1,200 00
Hemlock lumber, feet,	3,000,000	15,000 00
Cherry lumber, feet,	200,000	5,000 00
Ash lumber, feet,	25,000	375 00
Birch lumber, feet,	25,000	300 00
Maple lumber, feet,	50,000	500 00
Poplar lumber, feet,	300,000	4,500 00
		$30,875 00
Lath—hemlock, number,	2,000,000	2,000 00

OCCUPATION.	Number of men.	Number of boys.	Daily wages paid men.	Hours worked per day.	Days in operation during year.	REMARKS.
Foreman,	1	None.	From $1 00 to $2 50.	Eleven and one half.	About four months.	Have run a few weeks at a time, this year, so that it is difficult to make a regular report.
Head sawyers,	2					
Setters,	2					
Edgers,	2					
Filer,	1					
Lath sawyers,	4					
Lath bundler,	1					
Lumber counter,	1					
Shipper,	1					
Laborers,	30					
Engineer,	1					
Fireman,	1					

CHARACTERISTICS OF ESTABLISHMENT.—Mill for hemlock business; other woods are incidental. Business so poor, have run but little this year, which accounts for the discrepancy between capital and production. Capital remains, while production is small.

A. B. PRESTON,
Agent.

Short & Horton.

Brockport, Elk county.

Establishment located in Brockport, Elk county.

Whole number of persons employed, from 10 to 40.

Amount of capital employed in business, $75,000.

Amount paid annually for wages of employés, $10,000.

Amount paid for materials used in business, about $1,000; we furnish most of our own material.

ANNUAL PRODUCT.		VALUE.
White pine lumber, feet,	1,500,000	$15,000 00
Hemlock lumber, feet,	200,000	1,000 00
Shingles—pine, number,	950,000	2,850 00

Whole number of persons employed: 4 persons making shingles.

OCCUPATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foreman, ...	1	. . .	$1 50	. . .	10	About 150.	Foreman does the filing.
Head sawyer, ...	1	. . .	1 50	. . .	10		
Setter, ...	1	. . .	1 25	. . .	10		
Edgers, ...	3	. . .	1 25	. . .	10		
Lumber counters, . .	2	. . .	1 25	. . .	10		Pile the boards.
Laborer, ...	1	. . .	1 25	. . .	10		
Blacksmith, ...	1						

CHARACTERISTICS OF ESTABLISHMENT.—Establishment is known as the Brockport mill. Property is located on little Toby creek, twenty miles above its mouth. The lumber is rafted and run down the Toby to Clarion river, thence on Allegheny river to Pittsburgh. Shingle mill in building by itself, one fourth mile below saw-mill. Both mills run by water power. Store and blacksmith shop connected with the establishment; also about one hundred acres cleared land, in good state of cultivation, with orchards, barns, and other outbuildings.

SHORT & HORTON.

LYCOMING COUNTY.

F. Colemam.

Williamsport, Lycoming county.

Establishment located in Lycoming county.

Whole number of persons employed, 54. Making and piling lath and pickets, and piling and shipping lumber done by contract; these men not included.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $27,714 97.

ANNUAL PRODUCT.		VALUE.
White pine lumber, feet, ...	14,543,862	$218,157 93
Lath—pine, number, ...	4,681,300	7,021 95
Pickets—pine, number, ...	199,080	1,990 80

OCCUPATION.	Number of men.	Number of boys.	Average daily wages paid men.	Average daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foreman,	1	. . .	$3 85	. . .	10	312	
Head sawyers,	6	. . .	1 77	. . .	10	157	
Sawyers,	5	. . .	1 45	. . .	10	157	
Filers,	3	. . .	2 98	. . .	10	312	
Lath sawyers,	. . .	. . .	.	. . .	10	. . .	Contracted.
Lumber counters,	2	. . .	2 12½	. . .	10	312	
Shippers,	.	. . .	.	. . .	10	. .	Contracted.
Laborers,	32	3	1 43	$1 15	10	157	
Engineer,	1	. . .	3 00	. . .	10	312	
Fireman,	1	. . .	1 75	. . .	10	157	

F. COLEMAN.

Bowman, Foresman & Co.

Williamsport, Lycoming county.

Establishment located in Lycoming county.

Whole number of persons employed, 90.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $20,000.

ANNUAL PRODUCT.		VALUE.
White pine lumber, feet,	15,500,000	$200,000 00
Hemlock lumber, feet,	1,500,000	12,000 00
Shingle—pine, number,	600,000	3,000 00
Lath—pine, number,	2,800,000	3,500 00

OCCUPATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	Days in operation during year.	REMARKS.
Foreman,	1	. .	$5 00	. . .	10	200	
Head sawyers,	6	. . .	1 60	. . .	10	200	
Setters,	2	. . .	1 50	. . .	10	200	
Edgers,	2	. . .	1 80	. . .	10	200	
Filers,	3	. . .	3 00	. . .	10	200	
Lath sawyers,	6	. . .	1 50	. . .	10	200	
Lath bundlers,	2	. . .	1 50	. . .	10	200	
Lumber counters,	3	. . .	3 00	. . .	10	200	
Shippers,	12	. . .	1 50	. . .	10	300	
Laborers,	51	. . .	1 40	. . .	10	200	
Engineer,	1	. . .	3 00	. . .	10	200	
Firemen,	2	. . .	1 50	. . .	10	200	

REMARKS.—This report includes B. C. Bowman & Co. and Williams & Foresman, who operate a steam saw-mill under firm name of Bowman, Foresman & Co.

BOWMAN, FORESMAN & CO.

Brown, Earley & Co.

Williamsport, Lycoming county.

Establishment located in Lycoming county.

Whole number of persons employed, 175.

Amount of capital employed in business, $150,000.

Amount paid for materials used in business—we have our timber lands.

Annual product—White pine lumber, 5,400,000 feet; hemlock, 130,000 feet; lath, (pine,) 6,005,000.

OCCUPATION.	Number of men.	Number of boys.	Daily wages paid men.	Daily wages paid boys.	Hours worked per day.	REMARKS.
Foremen,	2	...	$3 00	...	10	
Head sawyears,	5	...	1 75	...	10	
Sawyers, (seconds,)	12	...	1 40	...	10	
Edgers,	2	1	1 75	$1 40	10	
Filers,	2	...	3 50	...	10	
Lath sawyers,	2	2	2 00	1 50	10	
Lath bundler,	1	1	1 50	1 25	10	
Lumber counters,	2	...	2 00	...	10	
Shippers,	10	...	1 00	...	10	
Laborers,	22	4	...	...	10	
Engineer,	1	...	3 50	...	10	
Fireman,	...	1	...	1 50	10	

Stockers in woods, about 100 men during winter and spring.

BROWN, EARLEY & CO.

WOOLEN-MILLS.

DELAWARE COUNTY.

Todmorden Woolen-Mill.

Media, Delaware county.
Establishment located in Delaware county.
Value of annual product, $170,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Days in operation during year.
Wool washer,	1	...	...	$1 20	...	...	Two hundred and eighty-two.
Dyers,	4	...	...	1 20	...	...	
Overseer,	1	...	...	3 10	...	...	
Carding and Spinning:							
Picker,	1	1	1	1 20	$0 50	$0 40	
Carder,	1	...	10	3 60	...	66	
Spinners,	6	...	...	1 50	...	...	
Warpers and beamers,	2	...	...	1 70	...	...	
Reelers,	2	...	...	62	...	...	
Overseer,	1	...	...	1 65	...	...	
Assistant,	1	...	...	1 50	...	...	
Weaving:							
Weavers,	11	24	...	1 00	1 00	...	
Burlers,	...	4	...	...	75	...	
Overseers,	3	...	1	1 75	...	40	
Engine-Room, Yard, &c.							
Engineer,	1	...	...	1 27	...	...	
Mechanics,	2	...	...	2 10	...	...	
Laborers, (watchmen included,)	2	...	...	1 35	...	...	
Foreman,	1	...	...	8 33	...	...	
Dressing and Finishing:							
Fullers,	2	...	...	1 45	...	...	
Dressers or giggers,	12	...	...	1 20	...	...	
Finisher,	1	...	...	1 20	...	...	
Press-tender,	1	...	...	1 30	...	...	
Packer,	1	...	...	1 70	...	...	
Overseer,	1	...	...	3 50	...	...	

SAMUEL BANCROFT

J. Ledward & Son.

Chester, Delaware county.
Establishment located in Delaware county.
Whole number of persons employed, 111.
Amount of capital employed in business, $100,000.
Amount paid annually for wages of employés, $40,000.
Amount paid for materials used in business, $80,000; and value of annual product, $120,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Dyers,	1	...	...	$2 00	...	...	10	280
Laborers in dye-house,	4	...	...	1 33⅓	...	...	10	280
Carding and Spinning.								
Picker tenders,	2	...	1	1 50	...	$0 75	10	280
Carder,	1	...	...	3 00	...	...	10	280
Spinner,	1	...	...	2 50	...	...	10	280
Twister and beamers,	2	...	...	1 67	...	...	10	280
Piecers,	...	...	15	...	...	58⅓	10	280
Card tenders,	2	...	5	1 25	...	83⅓	10	280
Assistant spinner,	1	...	...	1 00	...	...	10	280
Weaving.								
Weavers,	4	60	...	1 00	$1 00	...	10	280
Burlers,	...	4	...	...	70	...	10	280
Overseers,	2	...	...	2 50	...	...	10	280
Engine-room, Yard, &c.								
Engineer,	1	...	...	3 00	...	...	10	280
Laborer, (watchman included,)	1	...	...	2 00	...	...	10	280
Dressing and Finishing.								
Shearer,	1	...	1	1 00	...	70	10	280
Finisher,	1	...	...	2 00	...	...	10	280
Book-keeper,	1	...	...	2 50	...	...	10	280

REMARKS.—The mills are situated on Redly creek, in the North ward of the city of Chester. Manufacture doe skins and jeans, made from wool and cotton. No stopping except for repairs and holidays. Employés sober, intelligent, and attentive to work; seldom losing any time.

J. LEDWARD & SON.

The Parkmount Cotton and Woolen Company, Limited.

Lenni, Delaware county.
Establishment located in Lenni, Delaware county.
Whole number of persons employed, 75.
Amount of capital employed in business, $80,000.

Amount paid annually for wages of employés, $25,000.

Amount paid for materials used in business and value of annual product, $100,000 per year.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Daily wages paid men.	Daily wages paid women.	Hours worked per day.	Days in operation during year.
Dyers,	4	...	$1 75	...	10	300
Carding and Spinning.						
Picker,	1	...	1 50	...	10	300
Carder, boss,	1	...	2 50	...	10	300
Spinner, boss,	1	...	2 00	...	10	300
Warpers and beamers,	2	...	2 50	...	10	300
Weaving.						
Weavers,	25	15	...	$1 25	10	300
Burler,	1	...	80	...	10	300
Engine-room, Yard, &c.						
Engineer,	1	...	2 00	...	10	300
Mechanic,	1	...	2 00	...	10	300
Dressing and Finishing.						
Finisher,	1	...	2 00	...	10	300

Spoolers, twisters, and card-room help, 22 hands; 70 cents per day.

REMARKS.—Manufacturer fancy goods, men's wear, cotton and wool mixtures.

JOHN BURNLEY,
Secretary and Treasurer.

John Maxson.

Chester, Delaware county.

Establishment located in Chester city, Delaware county.

Whole number of persons employed, 45.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $15,000.

Amount paid for materials used in business, $34,681 14; and value of annual product, $34,646 92

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Dyer,	1	...	...	$2 00	...	...	10	300
Carding and Spinning.								
Picker,	1	...	...	1 00	...	...	10	300
Carders,	2	...	...	1 50	...	...	10	300
Card tenders,	...	...	3	...	...	$0 75	10	300
Spinner,	1	...	4	2 00	...	50	10	300
Warper and beamer,	1	...	...	2 00	...	...	10	300
Weaving.								
Weavers,	...	25	...	...	$1 15	...	10	300
Burlers,	...	2	...	...	83⅓	...	10	300
Overseer,	1	...	...	2 50	...	...	10	300
Engine-room, Yard, &c.								
Engineer,	1	...	...	2 00	...	...	10	300
Laborer, (watchman included,)	1	...	...	1 00	...	...	10	300
Dressing and Finishing.								
Finisher,	1	...	...	1 50	...	...	10	300
Superintendent,	1	...	...	2 50	...	...	10	300

REMARKS.—Manufacture imitation cass cottonades and jeans. Stock, cotton and shoddy. Total yards, 277,446. Cotton warps, 34,680 lbs.; raw cotton, 52,021 lbs.; shoddy, 52,021 lbs. Was stopped from January 19th to June, re-building and refixing from cause of fire.

JOHN MAXSON & SON.

Lilley & Son.

Chester, Delaware county.

Establishment located in Delaware county.

Whole number of persons employed, 77.

Amount of capital employed in business, $45,000.

Amount paid annually for wages of employés, $30,000.

Amount paid for materials and repairs, $92,000; value of annual product, $126,846.

Occupation and Classification.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Dyers,	2	. . .	1	$1 50	$0 83	10	307
Overseer,	1	. . .	. . .	3 00	. . .	10	307
Carding and Spinning:							
Pickers,	2	. . .	1	2 00	75	10	307
Carders,	2	. . .	1	2 00	83	10	307
Spinner,	1	. . .	7	2 50	83	10	307
Warpers and beamers,	2	. . .	. . .	2 00	. . .	10	307
Weaving:							
Weavers,	8	40	. . .	. . .	. . .	10	307
Burlers,	. . .	. . .	2	. . .	50	10	307
Overseers,	2	. . .	. . .	2 50	. . .	10	307
Engine-room, Yard, &c.:							
Engineer,	1	. . .	. . .	2 00	. . .	10	307
Dressing and Finishing:							
Finishers,	3	. . .	. . .	2 50	. . .	10	307

During the year, we have increased our capacity from 80 looms to 100, 20 of which are fast looms. We have been compelled to introduce improved machinery in every part of our mill. In 1871, we sold our jeans at 25 cents per yard. At that time cotton was 16 cents per pound, and wool, 55 cents. At the present time, we are glad to sell at 10 cents per yard, net, with cotton at $9\frac{3}{4}$ cents, and wool at 42 cents. These are figures from our books, and go to show that manufacturers are very much depressed. Our Mr. Lilley, senior, was in Europe about eighteen months ago, and found such a difference in wages, that, if we were not protected by a high tariff, the mills would all have to close up, and the market would be left entirely in the hands of foreign manufacturers.

LILLEY & SON.

Benjamin Gartside & Sons.

Chester, Delaware county.

Establishment located in Chester, Delaware county.

Whole number of persons employed, 75.

Amount of capital employed in business, $80,000.

Amount paid annually for wages of employés, $25,000.

Number of yards of woolen jeans manufactured during the year 650,000; value, $170,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Wool sorters,	2			$1 15			10	290
Wool washer,	1			1 12			10	
Dyers,	4			1 20			10	
Carding and Spinning:								
Picker,	1			1 50			10	
Carders,	3		5	2 00		$0 80	10	
Spinner,	1		8	2 00		50	10	
Warper and beamer,	1			1 50				
Overseer,	1			3 00				
Weaving:								
Weavers,		41			$1 15		10	
Burlers,		2			80		10	
Overseer,	1							
Engine-room, Yard, &c.:								
Engineer,	1			2 25			10	
Mechanic,	1			3 00			10	
Watchman,	1			1 15			10	
Foreman,	1							
Dressing and Finishing:								
Finishers,	2			1 75			10	

B. GARTSIDE & SONS.

Auvergne Mills.

Chester, Delaware county.

Establishment located in Delaware county.

Whole number of persons employed, 39.

Amount of capital employed in business, $30,000.

Amount paid annually for wages of employés, $14,500.

Amount paid for materials used in business, $32,500; and value of annual product, $46,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Dyers,	2							Full time.
Carding and Spinning.								
Picker,	1							
Card tenders,	...	...	2					
Spinners,	1	...	2					
Overseer,	1							
Assistant,	1							
Weaving.								
Weavers,	..	22	2					
Burler,	...	...	1					
Overseer,	1							
Engine-room, Yard, &c.								
Engineer,	1							
Dressing and Finishing.								
Finisher,	1							
Press tender,	1							

N. L. YARNALL.

COTTON.

D. Trainer & Sons.

Linwood, Delaware county.
Establishment located in Delaware county.
Whole number of persons employed, 225.
Amount of capital employed in business, $400,000.
Amount paid annually for wages of employés, $75,600.
Amount paid for materials used in business, $151,670.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.								
Overseers,	3		3	$2 50			10	275
Picker-tenders,	2		5			$0 75		
Railway-tenders,			1					
Drawing-frame-tenders,		4			$0 75			
Speeder-tenders,		25			1 00			
Picker-boy,			1			66		
Grinders,	4			1 37				
Strippers,	6			1 08				
Spinning.								
Overseers to second hand,	6			2 50				
Helpers,			3			1 00		
Mule-spinners,			4					
Mule-back side pieces,			4					
Frame-spinners,		32			1 00			
Doffers and sweepers,			22			50		
Dressing.								
Overseer,	1			2 50				
Second hand,	3							
Spoolers,		33			80			
Warpers,	9			2 00				
Drawers and twisters,	2		2					
Dressers,	2							
Weaving.								
Overseer,	1			3 00				
Weavers,		35			1 08			
Teamsters,	2			1 25				
Repair Shop, Engine-room, &c.								
Wood-workers,	2			2 00				
Iron-workers,	2			2 00				
Engineers,	3			2 00				
Laborers,	2			1 25				
Overseer in cloth-room,	1			1 75				

REMARKS.—Our works have no decided characteristics.

D. TRAINER & SONS.

The Eddystone Manufacturing Company, (Limited.)

Chester, Delaware county, and Philadelphia.
Establishment located in Delaware county, Ridley township.
Whole number of persons employed, 551.
Amount of capital employed in business, $1,000,000.
Amount paid annually for wages of employés, from $190,000 to $200,000.
Amount paid for materials used in business, about $2,500,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	No. of apprentices.	Number of youth.	Daily wages paid men.	Daily wages daid women.	Daily wages paid apprentices.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Engraving:										
Foreman,	1								10	300
Engravers,	12		5						10	300
Painters,		2				$0 85			10	300
Helpers,	5			2	$1 50			$1 00	10	300
Singeing:										
Foreman,	1								10	300
Singers,	4			6	1 33			50	10	300
Brushers,	2				1 33				10	300
Sewers,	1		5		1 33	75			10	300
Bleaching:										
Foreman,	1								10	300
Helpers,	7			25	1 25			50	10	300
Color mixing:										
Foreman,	1								10	300
Helpers,	16				1 33				10	300
Shearing:										
Foreman,	1								10	300
Shearers and winders,	13			2	1 33			85	10	300
Drying:										
Foreman,	1								10	300
Tenders,	2			17	1 25			35	10	300
Hanging:										
Foreman,	1								10	300
Tenders and helpers,	10			14	1 25			50	10	300
Padding:										
Foreman,	1								10	300
Tenders,	5				1 33				10	300
Printing:										
Foreman,	1								10	300
Printers,	14				4 50				10	300
Tenders,	14			14	1 42			50	10	300
Helpers,	23				1 25				10	300
Dyeing:										
Foremen,	2								10	300
Helpers, &c.,	30	2		42	1 33	50		50	10	300
Finishing:										
Foreman,	1								10	300
Tenders and helpers,	25			45	1 33			50	10	300
Folding:										
Foreman,	1								10	300
Folders, ticketers, and packers,	28	46			2 00 to 1 33	80			10	300
Retorts:										
Foreman,	1								10	300
Helpers,	6				1 33				10	300

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	No. of apprentices.	Number of youths.	Daily wages paid men.	Daily wages paid women.	Daily wages paid apprentices.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Firemen and watchmen:										
Foreman,	1				$2 00				10	300
Firemen,	10				1 50				10	300
Watchmen,	6				1 50				10	300
Machine shops:										
Foreman,	1								10	300
Wood-workers,	5				2 25				10	300
Iron-workers,	11		4		2 50		$1 00		10	300
Laborers,	60				1 25				10	300

REMARKS.—Print, exclusively, mourning and fancy calicoes, and chiefly on 64×64 cloth. The cloth is purchased in the grey, and the amount of same is included in the item "of amount paid for materials used," &c. An additional value is given to the cloth, by the printing done at the works, a trifle in excess of the cost of labor, drugs, and other materials, and expenses, incidental to the process of printing.

WILLIAM SIMPSON,
General Manager.

The Irving and Leiper Manufacturing Company.

Chester, Delaware county.
Establishment located in Chester, Delaware county.
Whole number of persons employed, 87.
Amount of capital employed in business, $100,000.
Amount paid annually for wages of employés, $28,000.
Amount paid for materials used in business, $110,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Average daily wages paid men.	Average daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.								
Overseers,	2	...	...	$2 70	...	...	...	307
Picker-tender,	1	...	...	1 60	...	...	...	307
Railway-tender,	...	1	2	...	$0 75	$0 75	...	307
Drawing-frame-tenders,	...	4	...	...	83	...	...	307
Speeder-tenders,	...	10	...	...	1 00	...	...	307
Extra hands,	...	3	1	...	80	80		
Picker-boys,	...	...	3	...	...	66		
Grinders,	2	...	...	1 60	...	...	...	307
Strippers,	4	...	...	1 50				
Spinning.								
Overseers,	2	...	...	2 60				
Second-hand,	1	...	...	1 25				
Mule-spinners,	3	...	...	1 25				
Mule-back side piecers,	...	...	6	...	...	66	...	307
Frame-spinners,	...	15	8	...	70	70	...	307
Dressing.								
Spoolers,	...	...	9	...	...	80	...	307
Warpers,	3	...	...	2 50	...	...	...	...
Repair-Shop, Engine-room, etc.								
Iron-worker,	1	...	1	2 16	...	40	10	307
Engineer,	1	...	...	2 50	...	...	10	307
Laborer,	1	...	...	1 25	...	...	10	307
Spare-hands,	2	...	...	1 50	...	...	10	307
Watchman,	1	...	...	1 50	...	...	10	307

REMARKS.—This establishment manufactures cotton yarns. They are made into warps and sold to weavers, and into hosiery yarns, which are sold to manufacturers of hosiery. The business was conducted by the firm of Irving & Leiper up to October 1, 1877, when it was incorporated by a charter from the State, and became the Irving and Leiper Manufacturing Company. The wages paid individuals vary, and average amounts paid are given. The officers of the corporation are, James Irving, president; Thomas I. Leiper, treasurer.

THOMAS I. LEIPER, *Treasurer.*

Broad Street Mills.

Chester, Delaware county.

Establishment located in Delaware county.

Whole number of persons employed, 35 men, 43 women, and 45 youths; total, 123.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $25,919 16 for 1878.

Amount paid for materials used in business, about $40,250.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.								
Overseers,	3			$6 16				
Picker-tender,	1			1 50			10	300
Drawing-frame-tenders,		5			$3 32			
Speeder-tenders,		9			8 10			
Picker-boy,	1			4 00				
Grinders,	3			3 33				
Spinning.								
Mule-spinners,	3			4 50				
Mule-back side piecers,			3			$1 00		
Frame-spinners,			35			5 25		
Dressing.								
Second hands,			2			1 20		
Spoolers,		11			7 34			
Warpers,	4			7 25				
Drawers and twisters,	2			1 50				
Dressers,	5			6 30				
Weaving.								
Overseer,	1			2 00				
Weavers,	5	18		4 20	15 12			
Repair Shop, Engine-room, &c.								
Wood-worker,	1			1 66				
Iron-worker,	1			1 84				
Engineer,	1			1 66				
Laborer,	1			1 25				
Overseer in cloth-room,	1			2 00				
Doffers, (spinning,)			4			2 40		
Dyer,	1			1 25				
Cloth folders,	1		1	1 25		50		

JAMES STEPHENS.

Samuel A. Crozer.

Upland, Delaware county.

Establishment located in Delaware county.

Whole number of persons employed, 350.

Amount of capital employed in business, $500,000.

Amount paid annually for wages of employés, $135,707.

Amount paid for materials used in business, $222,450.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Days in operation during year.
Carding:							
Overseers,	2	. . .	. . .	$2 75			
Picker-tenders,	5	. .	. . .	1 40			
Drawing-frame-tenders,	. . .	6	. . .	. . .	$1 08	. . .	308
Speeder-tenders,	. . .	15	. . .	. . .	1 25		
Grinders,	2	. . .	. . .	1 50			
Strippers,	4	. . .	2	1 40	. . .	$0 83	
Spinning:							
Overseers,	4	. . .	. . .	2 50			
Mule-piecers,	3	. . .	4	1 50	. . .	66	
Mule-back side piecers,	. . .	. . .	4	. . .	. . .	58	
Frame-spinners,	. . .	. . .	79	. . .	. . .	58	
Dressing:							
Spoolers,	. . .	39	. . .	. . .	1 00		
Warpers,	10	. . .	. . .	2 00			
Beamers and twisters,	8	. . .	3	2 00	. . .	58	
Weaving:							
Overseers,	7	. . .	. . .	2 33			
Weavers,	20	40	69	1 50	1 20	1 15	
Repair-shop, Engine-room, &c.:							
Wood-workers,	5	. . .	. . .	2 00			
Iron-workers,	2	. . .	. . .	2 16			
Engineer,	1	. . .	. . .	2 75			
Laborers,	3	. . .	. . .	1 50			
Overseer in cloth-room,	1	. . .	. . .	2 33			
Overseers in cloth-room, (assistants,)	2	. . .	6	1 50	. . .	58	
Dyer,	1	. . .	. . .	3 33			
Dyers, (assistants,)	6	. .	. . .	1 50			

Goods manufactured are plaids, checks, and shirting cheviots. The factories have run steadily for years, and the working people are comfortable, and apparently contented. Wages reduced 25 per cent. from the highest point during the war.

SAMUEL A. CROZER.

J. P. Crozer's Sons.

Upland, Delaware county.
Establishment located in Delaware county.
Whole number of persons employed, 398.
Amount of capital employed in business, $500,000.
Amount paid annually for wages of employés, $140,000.
Amount paid for materials used in business, $240,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.
Carding:							
Overseers,	2	...	...	$2 75	...	...	10
Picker-tenders,	4	...	...	1 17			
Slabber-tenders,	...	8	...	...	$1 05		
Drawing-frame-tenders,	...	4	...	...	90		
Speeder-tenders,	...	11	...	...	1 00		
Picker-boys,	...	...	2	...	...	$0 96	
Grinders,	2	...	...	1 46			
Strippers,	6	...	...	1 17			
Spinning:							
Overseers,	4	...	...	2 15			
Overseers, (assistants,)	2	...	...	1 33			
Mule-spinners,	2	...	3	1 50	...	81	
Mule-back side piecers,	...	...	9	...	...	41	
Frame-spinners,	...	...	77	...	...	48	
Dressing:							
Overseer,	1	...	...	1 66			
Winders,	...	32	...	...	62		
Spoolers,	...	25	...	...	80		
Warpers,	10	...	...	2 00			
Drawers and twisters,	11	...	...	1 50			
Overseer beamers,	2	...	...	2 50			
Weaving:							
Overseers,	8	...	...	2 00			
Weavers,	89	51	...	1 20	1 05		
Reelers,	...	6	...	...	94		
Repair-shop, Engine-room, &c.:							
Foreman, (dyer,)	1	...	...	2 83			
Wood-worker,	1	...	...	1 83			
Iron-workers,	2	...	...	2 18			
Engineers,	2	...	...	2 30			
Laborers,	3	...	...	1 25			
Overseers in cloth-room,	2	...	...	2 55			
Folders and pressmen,	2	...	...	1 60			
Hookers and stitchers,	...	...	6	...	...	57	
Dyers and sizers,	8	...	...	1 41			
Packing-box maker,	1	...	...	1 25			

J. P. CROZER'S SONS,
Per G. C. R.

A. Blakeley & Sons.

Chester, Delaware county.

Establishment located in city of Chester, Delaware county.

Whole number of persons employed: Varies from 125 to 140.

Amount of capital employed in business, $150,000.

Amount paid annually for wages of employés, $48,000.

Amount paid for materials used in business, $60,000.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.								
Overseer,	1			$3 50			10 hours per day.	Every working day except holidays.
Picker-tenders,	1		1	1 50		$0 33		
Railway-tenders,			3			33		
Drawing-frame-tenders,		2			$1 00			
Speeder-tenders,		4			1 00			
Grinder,	1			1 50				
Spinning.								
Overseers,	1		1	2 57		1 12		
Mule-spinner,	1			2 33				
Mule-back side piecers,			3			57		
Frame-spinners,		21	4		50	57		
Dressing.								
Spoolers,		10			75			
Warpers,	4			1 35				
Weaving.								
Overseers,	3			2 57				
Weavers,	37	47		1 24	1 00			
Drawing-in hands and beamers,	4		3	1 57		75		
Repair-shop, Engine-room, etc.								
Engineer,	1			1 50				
Overseers in cloth-room,	2			1 50				
Dyers,	3		2	*		1 00		

* One $2 50, two $1 50.

A. BLAKELEY & SONS.

Samuel Riddle & Son.

Glen Riddle, Delaware county.
Establishment located in Delaware county.
Whole number of persons employed, 175.
Amount of capital employed in business, $250,000.
Amount paid annually for wages of employés, $54,000.
Amount paid for materials used in business, $206,356 66.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding :								
Overseers,	2			$2 37 2 00			Average 10 hours.	Two hundred and ninety-two days.
Picker-tenders,	4		1	8 50		$0 50		
Railway-tenders,			3			62½		
Drawing-frame-tenders,		6			$0 70			
Speeder-tenders,		8			*			
Picker-boy,			1			38		
Grinders,	2			1 37		1 00		
Strippers,			3			95		
Spinning :								
Overseer,	1			1 50				
Mule-spinners,			14			54		
Frame-spinners,			66			30		
Dressing :								
Overseers,	3			1 80		1 00		
Second hand,			1			1 00		
Spoolers,		20			75			
Warpers,	6			2 15				
Drawers and twisters,	1		4	2 00		60		
Weaving :								
Overseers,	4		1	2 00		50		
Weavers,	57	49		†	‡			
Beamers,	5		5	1 87		50		
Repair-shop, engine-room, etc.:								
Wood-workers,	3			2 00				
Iron-workers,	4			2 25				
Engineer,	1			2 16				
Laborers,	4		1	1 25		50		
Overseer in cloth-room,	1	1	4	2 00	75	50		
Dye-house :								
Overseer,	1			2 50				
Laborers,	11			1 37½				

* Piece work, average 70 cents. † Piece work, $1 25. ‡ Piece work, $1 00.

SAMUEL RIDDLE & SON.

I. Wm. Lewis.

Chester, Delaware county.
Establishment located in Chester, Delaware county.
Whole number of persons employed, 180.
Amount of capital employed in business, $170,000.
Amount paid annually for wages of employés, $59,800.
Amount paid for materials used in business, $219,494 87.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.							Ten hours.	Three hundred and eight days.
Overseer,	1	. . .	. . .	$2 66				
Picker-tender,	1	. .	. . .	2 00				
Drawing-frame-tenders,	. .	2	. . .	. . .	$0 75			
Speeder-tenders,	. . .	6	. . .	. .	1 00 to 1 50			
Picker-boy,	. .	. . .	1	. . .	. . .	$1 16		
Grinders,	1	. . .	. . .	1 62				
Strippers,	2	. . .	. .	1 16 1 38				
Spinning.								
Overseers,	2	. . .	. .	2 66 2 16				
Mule-spinners,	5							
Mule-back side piecers,	4							
Frame-spinners,	. . .	. .	25 to 30	. . .	. .	50 to 75		
Dressing.								
Spoolers,	. . .	. . .	5	. . .	. .	75		
Warpers,	3	. . .	. . .	2 50				
Drawers and twisters,	. .	. . .	3	. . .	. . .	1 25		
Beamers,	4	. .	. .	2 16				
Weaving.								
Overseers,	4	. . .	. . .	2 16				
Weavers,	20	50	. . .	1 25				
Repair-shop, Engine-room, etc.								
Wood-worker,	1	. . .	. . .	2 00				
Iron-worker,	1	. . .	. . .	2 25				
Engineer,	1	. . .	. . .	2 66				
Overseer in cloth room,	1	. . .	. . .	1 62				

REMARKS.—Besides the hands classified above, there are dyers, clerks, superintendent, watchman, and a number of hands which do varions work about a mill which can not be classified. The mill runs almost exclusively on cotton plaids and stripes. This paper was mailed to the wrong post office address, and consequently delayed.

I. WM. LEWIS.

Harrisburg Cotton-Mill Company.

Harrisburg, Dauphin county.

Establishment located in Harrisburg, Dauphin county.

Whole number of persons employed, about 250.

Amount of capital employed in business, $250,000.

Amount paid annually for wages of employés, $48,000.

Amount paid for materials used in business, $121,291.

OCCUPATION AND CLASSIFICATION.	Number of men.	Number of women.	Number of youth.	Daily wages paid men.	Daily wages paid women.	Daily wages paid youth.	Hours worked per day.	Days in operation during year.
Carding.							Sixty-six hours per week.	Two hundred and forty days.
Overseers,	3			$1 92				
Picker-tenders,			6			$0 50		
Railway-tenders,			4			33⅓		
Drawing-frame-tenders,		4			$0 73			
Speeder-tenders,		31			62			
Oiler-boys,			3			56		
Grinders,	2			1 25				
Strippers,	9			1 00				
Spinning.								
Overseers,	3			1 64				
Frame-spinners,			65			50		
Dressing.								
Overseer,	1			2 25				
Second hand,	1			1 67				
Spoolers,			10			62		
Warpers,		2			80			
Drawers and twisters,		5			62			
Weaving.								
Loom-fixers,	5			1 88				
Weavers,		74			80			
Repair-shop, Engine-room, etc.								
Foreman,	1			2 00				
Wood-worker,	1			2 00				
Iron-workers,	3			1 25				
Engineer,	1			2 75				
Laborers and firemen,	4			1 33⅓				
Overseer in cloth-room,	1			2 00				
Packer in cloth-room,	1			1 50				
Boy in cloth-room,			1			50		
Trimmers in cloth-room,		8			60			

REMARKS.—All help employed in this mill are paid by the hour or piece.

EDWIN ANDREWS, *Superintendent.*

TANNERIES.

ADAMS COUNTY.

E. Crouse.

Post office address, Littlestown, Pa.

Persons employed, 2. Wages per day paid employés: men, $1 25; youths, 50 cents.

REMARKS.—The capacity of yard, 800 hides annually. Cannot furnish statement, as strict accounts were not kept. Products, rough slaughter finished calf, upper, kip, harness, &c. In operation during the entire year.

ALLEGHENY COUNTY.

A. & J. Groetzinger.

Post office address, Allegheny City, Pa.

Persons employed, 36; amount of capital employed in business, $150,000; amount paid annually for wages of employés, $18,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $190,000; value of annual product, $240,000. Wages per day paid employés: Tanners, $1 33⅓; beam hands, $1 75; yard hands, $1 20; rollers and spongers, $1 66⅔; bark grinders, $1 20; common laborers, $1 00; engineer, $2 16⅔; extra laborers, hired during the year for unloading and piling bark, $1 00. Hours worked per day, 10; days in operation during year, 300.

REMARKS.—Annexed you will find our exhibit for the year 1878, averaging balance of month of December by amount of sales of previous month. We were in operation the entire year. Trade, on an average, has been better than the preceding two years. Prices of raw material, as well as of leather, in anticipation of the resumption of specie payment, are believed to have touched bottom, and tanners, in general, are beginning to feel more hopeful, in view of the good prospects of trade. The demand from our home trade, during the entire fall season, has been constantly in excess of our supply. Have, therefore, accumulated no surplus stock whatever, as was the case in former years, when we exported largely to England and Germany. Our shipments abroad this year have, therefore, been very light, in comparison to former years, chiefly for want of surplus stock to send over, and also on account of low figures prevailing in England and Germany, as we could realize better prices in our home markets for the different grades of our oak sole leather. Hemlock sole, which is still exported largely, is more sought after, on account of its cheapness.

John Christian Lappe.

Post office address, Allegheny City, Pa.

Persons employed, 50 men; amount of capital employed in business, $100,000; amount paid annually for wages of employés, $20,000; amount paid annually for materials used in business, $125,000; value of annual product, $180,000. Wages per day paid employés: (Harness leather) Tanners, $1 50; beam hands, $1 66; yard hands, $1 00; bark grinders, $1 00; common laborers, $1 00; curriers, $1 50; shavers, 5 cents per hide; table hands, scourers, $1 50; blackers, $1 50; finishers, $1 50. Hours worked per day, 10; days in operation during year, 306.

REMARKS.—I occupy a three-storied brick and frame building—length, one hundred and three feet by one hundred feet wide. Power, 30-horse power engine. Use spent tan for fuel.

In reply to your letter, would say that there are eight tanneries here, manufacturing about 4,000 sides harness leather per week, as per following list: Frederick Woelfull, 200 sides; Lappe & Hax, 600 sides; Keifer, Steifel & Co., 500 sides; J. C. Lappe, 600 sides; William Flaccus & Son, 350 sides; A. Holstein, 400 sides; James Callery & Co., 600 sides; A. & J. Groetzinger, 1,200 sides sole leather.

ARMSTRONG COUNTY.

C. Mardorf.

Post office address, Freeport, Pa.

Number of persons employed, 6; amount of capitalemployed in business, $10,000; amount paid annually for wages of employés, $3,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $10,000; value of annual product, about $20,000; wages per day paid employés, $1 50 to $2 00.

BUCKS COUNTY.

S. B Seidel & Sons.

Post office address, Shoemakerville, Pa.

Number of persons employed, 4; amount of capital employed in business, $15,000; amount paid annually for wages of employés, $1,200;

amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $12,000; value of annual product, $14,000 to $17,000. Wages per day paid employés: Tanners, $1 00; beam-hands, $1 00; common laborers, 80 cents; hours worked per day, 10; days in operation, 225.

REMARKS.—The stock tanned is rough slaughter, tanned with oak bark. The greater part of hides, we receive from butchers from the surrounding counties. Capacity of tannery, 2,500 heavy hides per year; but, on account of the dullness of trade during the past few years, we have not worked more than half the capacity. The greater part of our leather goes into the hands of finishers, who manufacture it into harness and shoe skirting.

BEDFORD COUNTY.

J. B. Hoyt & Co.

Post office address, Everett, Pa., and 28 and 30 Spruce street, New York city.

Number of persons employed, 60 men; amount of capital employed in business, $250,000; amount paid annually for wages of employés, $20,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $295,534; value of annual product, $320,000. Wages per day paid employés: Tanners, $2 00; beam-hands, $1 50; yard, $1 40; bark grinders, $1 25; common laborers, $1 15.

REMARKS.—Average wages, including all men employed, except one foreman, is $1 35 per day. In operation during entire year. Also have a tannery at Ray's Hill, where we tan 78,250 bellies annually, and use 1,800 cords of bark, and employ 12 men, including foreman.

Griffith's Tannery.

Post office address, Spring Meadow, Pa.

Number of persons employed, 1; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $325; value of annual product, $436 70.

A. L. Hench.

Post office address, Alum Bank, Pa.

Whole number of persons employed, 8; amount paid annually for wages of employés, $3,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, used 950 bords oak bark; value, $4,750; value of annual product, 154,876 lbs.; value, $45,615.

Wages per day paid employés: Beam-hands, $1 23; yard, $1 15; rollers and spongers, $1 15 to $1 30; bark grinders, $1 15; common laborers, 90 cents to $1 00. Hours worked per day, 12; days in operation during year, 310.

Remarks.—Tanned, during the year, oak slaughter sole, and also some B. A. oak sole. The slaughter sole was tanned for other parties, at a given rate per pound. The profits of the business have been short, on account of the high price of hides, and the slow sales of leather, at low prices.

A. Haderman & Son.

Post office address, New Enterprise, Pa.

Number of persons employed, 4; amount of capital employed in business, $6,000; amount paid annually for wages of employés, $190 50; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,084; value of annual product, $7,250.

Remarks.—We are doing business with as little expense as possible, since the net gain on rough leather is very small. We tan and finish harness, upper, kip, and calf-skin.

BLAIR COUNTY.

William Smith.

Post office address, Duncansville, Pa.

Number of persons employed, 8; amount of capital employed in business, $30,000; amount paid annually for wages of employés, $3,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $20,000; value of annual product, $26,000. Wages per day paid employés: Tanners, 4; wages, $1 00; beam-hands, 2; wages, $1 25; common laborers, 2; wages, $1 00. Hours worked per day, 10; days in operation during year, 310.

BRADFORD COUNTY.

Adam Innes.

Post office address, Grannville Centre, Pa.

Number of persons employed, 20; amount paid annually for wages of employés, $8,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $82,000; value of annual product, $89,000. Wages per day paid employés: Tanner, 1; wages, $2 50; beam-hands, 4; wages, $1 38; yard, 3; wages, $1 00; rollers and spongers, 3; wages, $1 25; bark grinder, 1; wages, $1 00; common laborers, 3; wages, $1 00; engineer, 1; wages, $1 38; teamsters, 3; wages, $1 25; carpenter, 1; wages, $2 00. Hours worked per day, 10; days in operation during year, 308.

Adam Innes.

Post office address, Granville Centre, Bradford county, Pa.

Whole number of persons employed, 23; amount paid annually for wages of employés, $8,800; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $107,000; value of annual product, $115,0C0. Wages per day paid employés: Tanner, 1; wages, $2 50; beam-hands, 6; wages, $1 38; yard, 4; wages, $1 00; rollers and spongers, 3; wages, $1 25; bark grinder, 1; wages, $1 00; common laborers, 3; wages, $1 00; teamsters, $1 10; fireman, $1 38; carpenter, $2 50. Hours worked per day, 10; days in operation during year, 306.

REMARKS.—I have the general control, but am unable to give what my wages will be, as I work on a share of profits, and so far, this year, have been all loss.

The outlook for tanners is very dark, it seems to me. Unless they can get hides at lower figures, they will have to stop business or continue to lose money.

Thomas Smull's Sons.

Post office address, Athens, Pa.

Number of persons employed, 33; amount of capital employed in business, $50,000; amount paid annually for wages of employés, $13,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $25,000; value of annual product, $200,000. Wages per day paid employés: Beam-hands, 7; wages, $1 25; yard, 5; wages, $1 00; rollers and spongers, 4; $1 00 and $1 25; bark grinder, 1; common laborers, 16. Hours worked per day 10; days in operation during year, about 300.

BUCKS COUNTY.

A. D. Atherholt.

Post office address, Tohickon, Pa.

Number of persons employed, 3; amount of capital employed in business, $6,000; amount paid annually for wages of employés, $687; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,022; value of annual product, $4,146.

Noah Wambold.

Post office address, Sellersville, Pa.

Number of persons employed, 4; amount of capital employed in business, $3,000; amount paid annually for wages of employés, $700; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $3,000; value of annual product, $3,500.

CAMBRIA COUNTY.

W. H. Rosensteel.

Post office address, Johnstown, Pa.

Number of persons employed, 19; amount of capital employed in business, $20,000; amonnt paid annually for wages of employés, $6,200; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $15,000; value of annual product: tan by the pound, for a Boston firm. Wages per day paid employés: Beam hands, $6 78; yard, $3 30; rollers and spongers, $3 36; bark grinders, $1 00; common laborers, $5 00; engineer, $1 25. Days in operation during year, 300.

Remarks.—The Dell tannery tans by the pound, annually about 15,000 city slaughter hides, from eastern cities, and produces a superior article of Union crop leather, sold in New England markets, and known to leather dealers and shoe manufacturers of that section as the "Dell leather."

Summerhill Tannery.

Post office address, Summerhill, Pa.

Amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $150; value of annual product, $300.

JOHN E. HARE.

John J. Evans.

Post office address, Ebensburg, Pa.

Amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,200; value of annual product, $1,950.

CAMERON COUNTY.

Hamilton, Marten & Co.

Post office address, Emporium, Pa.

Number of persons employed, 40; amount of capital employed in business, $200,000; amount paid annually for wages of employés, $16,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $120,000; value of annual product, $186,000. Wages per day paid employés: tanners, $60 00 per month; beam-hands, 4½ cents per side; yard, $1 30; rollers and spongers, $1 20; Bark-grinders, $1 20; common laborers, $1 20.

REMARKS.—We are dry hides non-acid tanners, using mainly South American hides.

HAMILTON, MARTEN & CO.

B. F. Sherwood.

Post office address, Sterling Run, Pa.

Number of persons employed, average of 50 for the year 1878; amount of capital employed in business, $200,000; amount paid annually for wages of employés, from $15,000 to $18,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $150,000; value of annual product, $288,800. Wages per day paid employés: tanners, $1 50; beam-hands, $1 35; yard, $1 00; rollers and spongers, $1 00 to $1 25; bark grinders, $1 00; common laborers, $1 00; teamsters, $1 25; engineers, $1 25; women, 65 to 80 cents; youth, 60 to 75 cents. Hours worked per day, 10. Days in operation during year, 312.

REMARKS.—Work ten hours a day on an average, and in operation during the entire year. The tanning business is very much depressed and the prospect for the future does not brighten. Reasons assigned by the trade for this depression in business are as various as the sands of the sea. We believe it to be largely due to an over-production of leather. The anxiety of tanners to do business, always willing to work for nothing and board themselves. A year or two more like the past three or four years and they will look for some mighty cheap boarding-house, where luxuries are thrown in.

MILO BULL,
General Superintendent.

CARBON COUNTY.

Haller & Brother.

Post office address, Lehigh Gap.

Number of persons employed, 3; amount of capital employed in business, $4,500; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,500; value of annual product, $3,000.

CENTRE COUNTY.

J. F. Montgomery & Brother.

Post office address, Howard, Pa.

Number of persons employed, 2; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,004 47; value of annual product, $1,770 98.

Daniel Moser.

Post office address, Boalsburg, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,500; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,800; value of annual product, $2,100.

C. Buck.

Post office address, Fleming, Pa.

Number of persons employed, 4 to 5 hands; amount of capital employed in business, $15,000; amount paid annually for wages of employés, about $14,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $18,000 to $20,000. Wages per day paid employés: Beam hands, $1 50; yard, $1 00; engineer, $1 15.

Milesburg Tannery.

Post office address, Milesburg, Pa.

Whole number of persons employed, 2; amount of capital employed in business, $1,000; amount paid annually for wages of employés, $600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,640; value of annual product, $2,800.

Kurtz & Stover.

Post office address, Aaronsburg, Pa.

Whole number of persons employed, 2 ; amount of capital employed in business, $3,500 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,500 ; value of annual product, $2,500.

REMARKS.—Business chiefly the manufacture of harness, upper leather, kip, and calf skins. We finish all the shoe leather, and about one third of harness.

CHESTER COUNTY.

M. B. Chambers.

Post office address, Marshalton, Pa.

Number of persons employed, 6 ; amount paid annually for wages of employés, $2,000 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $20,000 ; value of annual product, $25,000. Wages per day paid employés : Beam-hands, $1 33⅓ to $1 66⅔ ; bark grinders, $1 15 ; common laborers, $1 15 ; tanners, $1 00 to $1 25 ; engineers, $1 25.

REMARKS.—Amount of stock worked this year, 1,560 hides, (cow, steer, and bull ;) 4,200 calf skins. Tan with chestnut oak bark ; as but little is to be had, our supply is obtained from western counties. All stock sold in rough. An abundance of green hides, &c., obtained in vicinity, mostly from West Chester, the county seat, about 5 miles distant. The tannery, all under cover, contains 58 vats, as follows : 6 leeches ; 14 handles ; 2 reel handles ; 27 layaways ; 4 vats ; 3 limes ; and 2 pools ; power consisting of 15 horse power engine, and 10-horse power water-wheel. Exhaust steam furnishes ample heat, by means of zinc pipe, to keep entire building warm at all times. Stock also all dried by steam heat in winter, having a drying-room 70 feet by 32 ; have no stock dried out of building. Principle market for stock, Philadelphia and New York. Buy bark by weight ; have erected a 5-ton scales at tannery, upon which all bark bought is weighed ; find the weight system preferable to measure. Railroad conveniences good ; only 3 miles from either Pennsylvania railroad or Wilmington and Northern Roads good, with light grades, to and from railroad.

J. P. Wilkinson & Brother.

Post office address, Unionville, Pa.

Number of persons employed, 6, regular ; amount of capital employed in business, $35,000 ; amount paid annually for wages of employés, $2,500 ;

amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $13,000; value of annual product, about $20,000. Wages per day paid employés: Beam hands, $1 50; yard, $1 00; bark grinders, $1 00; common laborers, $1 00.

REMARKS.—We do not give the above as absolutely accurate, as we have not kept our accounts with the few to a statement of this kind, but it approximates the truth, and as nearly accurate as we can give it. Brick tannery, all under roof, with steam as motive power.

CLARION COUNTY.

S. D. Nyers.

Post office address, Callensburg, Pa.

Number of persons employed, 2; amount of capital employed in business, $800; amount paid annually for wages of employés, $100; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,000; value of annual product, $1,800.

CLEARFIELD COUNTY.

Z. M. Naul.

Post office address, Curwensville, Pa.

Number of persons employed, 2; amount of capital employed in business, $3,000; amount paid annually for wages of employés, $800; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,500; value of annual product, $4,000.

M. Shirk.

Post office address, Clearfield, Pa.

Number of persons employed, 7; amount of capital employed in business, $50,000; amount paid annually for wages of employés, $3,375; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $10,000; value of annual product, $20,000. Wages per day paid employés: Foremen, $2 00; tanners, $1 50; beam hands, $2 00; yard, $1 50; bark grinders, $1 00; engineers, $1 50; laborers, 75 cents. Hours worked per day, 10; days in operation during year, 300.

REMARKS.—The tannery is run by steam, and the style of manufacture is exclusively "rough leather." Business during the year has been extremely dull, and in consequence of which we have not used so much stock, and the cost of operating, and unlooked for drawbacks, have run our expenses over the profits.

COLUMBIA COUNTY.

Edward B. Richie.

Post office address, Sereno, Pa., or No. 418 North Third street, Philadelphia.

Number of persons emyloyed, 6 ; amount of capital employed in business, $20,000 ; amount paid annually for wages of employés, $2,000 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $18,000 ; value of annual product, $20,000. Wages per day paid employés : Tanners, $1 50 ; beam hands, $1 50 ; yard, $1 00.

REMARKS.—This business was established for the special purpose of producing leather from heavy slaughtered hides of the first class, of a nature adapted to making the best quality of machine belting, especially wide main belts. The hides are trimmed into short "butts." The shoulder ends, about one third of the whole length, and the belly skirts, about one fourth of the whole width, are tanned separately, for sole leather purposes. Rock oak or chestnut oak bark is used almost exclusively, and from eight to twelve months are occupied in the process of tanning the butts, which are chiefly made into belting at my own factory, No. 418 North Third street, Philadelphia.

CUMBERLAND COUNTY.

William McLean.

Post office address, Shippensburg, Pa.

Number of persons employed, 25 ; amount of capital employed in business, $105,000 ; amount paid annually for wages of employés, $7,000 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $73,000 ; value of annual product, $80,000. Wages per day paid employés : Beam hands, $1 20 ; yard, $1 00 ; rollers and spongers, $1 20 ; bark grinders, $1 00 ; common laborers, $1 00.

REMARKS.—No profit was made in the business during the year 1878. Work 10 hours a day, and in operation 312 days in the year.

D. F. Stager, junior, & Rosanberger.

Post office address, Mechanicsburg, Pa.

Number of persons employed, 3 ; amount of capital employed in business, $3,925 ; amount paid annually for wages of employés, $300 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,625 ; value of annual product, $5,565.

Waggoner & Shively.

Post office address, Newville, Pa.

Number of persons employed, 4; amount of capital employed in business, $7,500; amount paid annually for wages of employés, $1,310, amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,150; value of annual product, estimated, $6,000. Wages per day paid employés, beam hands, $1 10; yard, $1 10; bark-grinders, 75 cents; curriers, $1 25. Hours worked per day, 10. Days in operation during year, beam hands, 282; yard, 240; bark grinders, 238; curriers, 236.

DAUPHIN COUNTY.

Greenawalt Brothers.

Post office address, Harrisburg, Pa.

Number of persons employed, 22; amount of capital employed in business, $100,000; amount paid annually for wages of employés, $9,200; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $35,842; value of annual product, $49,909. Wages per day paid employés, tanners, 2, $1 33; beam hands, 3, $1 33 to $1 67; yard, 2, $1 33; roller and sponger, 1, $1 50; bark-grinder, 1, $1 16; common laborers, 2, $1 00; curriers, 6, $2 00; splitter, 1, $2 50; shavers, 1, $2 00; engineer, 1, $1 33; clerk, 1, $1 67; salesman, 1, $1 67. Hours worked per day, 10. Days in operation during year, 311.

REMARKS.—Tannery building, Seventeenth and Derry street, 200x52 feet, 3 story, 168x80 feet, 3 story; 2 flue boilers, 1 thirty-horse engine, 2 bark-mills, 72 large vats, 36 small vats, 12 leaches, 3 cisterns, 6 large liquor tanks. House established 1811, by Jacob Greenawalt, senior. Manufacture oak leather, wax upper leather, wax leather for hose and belting, oak harness sole leather, oak rough kip leather, wax calf-skins. Name of tannery, "Paxton."

Josiah P. Stine.

Post office address, Elizabethville, Pa.

Amount of capital employed in business, $1,024 50; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,074; value of annual product, $1,153 99.

Isaiah Matter.

Post office address, Enders, Pa.

Number of persons employed, 2; amount paid annually for wages of employés, $250; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,000.

S. McIlhenny.

Post office address, Linglestown, Pa.

Number of persons employed, 2; amount of capital employed in business, $3,000; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,400; value of annual product, $3,200.

S. B. Reamberger.

Post office address, Gratz, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,500; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,500; value of annual product, $3,500.

J. & C. Swab.

Post office address, Pillow, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,000; amount paid annually for wages of employés, $350; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,000; value of annual product, $3,000.

ELK COUNTY.

Wilcox Tanning Company.

Post office address, Wilcox, Pa.

Number of persons employed, 200; amount paid annually for wages of employés, $78,000; value of annual product, $500,000. Wages per day paid employés, bosses, $3; beam hands, $1 25; yard, $1 25; rollers and spongers, $1 25; bark grinders, $1; common laborers, $1. Daily wages paid youth, 75 cents. Hours worked per day, 10½.

REMARKS.—Have tanned bison hides into sole leather exclusively for the last two years.

W. H. Osterhout.

Post office address, Ridgway, Pa.

Whole number of persons employed, 80; amount of capital employed in business, about $600,000; amount paid annually for wages of employés, $30,000; amount paid annually for materials, such as hides and skin, bark, oil, tallow, &c., used in business, about $400,000; value of annual product, $550,000.

REMARKS.—We tan nothing here but hemlock sole leather. Owing to overproduction and the forced economy of the American people, the business is still considerably depressed, but the outlook is improving.

ERIE COUNTY.

C. & W. C. Smith & Co.

Post office address, Waterford, Pa.

Number of persons employed, 4; amount of capital employed in business, $5,000; amount paid annually for wages of employés, $900; amount paid annually for material, such as hides and skins, bark, oil, tallow, &c, used in business, $10,550; value of annual product, $14,000.

C. E. Gunnison & Co.

Post office address, Erie, Pa.

Number of persons employed, 14; amount of capital employed in business, $40,000; amount paid annually for wages of employés, $5,500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $21,500; value of annual product, $31,000.

REMARKS.—Do a general business, making some sole, harness, upper leather, and calf-skins, but more rough leather than anything else, which is sold in Boston. Pay of men averages about nine (9) dollars per week. Tannery was idle about two months of past year, during June and July, on account of low price of leather or high price of hides.

FOREST COUNTY.

G. Brooks & Co.

Post office address, Brookston, Pa.

Number of persons employed, about 150; amount of capital employed in business, $350,000; amount paid annually for wages of employés, about $50,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $285,000; value of annual product, about $340,000. Wages per day paid employés: Tanners, $2 00; beam hands, $1 40; yard, $1 25; rollers and spongers, $1 25; bark grinders, $1 10; common laborers, $1 10; teamsters, $1 25; bark peelers, $1 25. Hours worked per day, 11; days in operation during year, 309.

FRANKLIN COUNTY.

A. Stiffel.

Post office address, Greencastle, Pa.

Number of persons employed, 2; amount of capital employed in business, $6,000; amount paid annually for wages of employés, $2,435; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,275; value of annual product, $5,025.

John H. Walker.

Post office address, Fannettsburg, Pa.

Number of persons employed, 4; amount of capital employed in business, $9,000; amount paid annually for wages of employés, $550; amount paid annually for materials, such as hides and skins, bark oil, tallow, &c., used in business, $4,000; value of annual product, $7,000.

M. D. Miller.

Post office address, Upper Strasburg, Pa.

Number of persons employed, 6; amount of capital employed in business, $6,000; amount paid annually for wages of employés, $1,500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $6,500; value of annual product, $7,500.

Solomon Sentman.

Post office address, Roxbury, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,000; amount paid annually for wages of employés, $562 50; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $3,357; value of annual product, $4,282.

Remarks.—Water-power tannery; 45 vats, 10 leeches, 4 limes, 2 sweats. 3 pools, 2 bates, all in good condition. Capacity of tannery—1,000 heavy, or 2,000 light hides per year, can be tanned. Location of tannery in Roxbury, on the bank of the Conadoguinnet creek, one mile from the Roxbury Gap, and nine miles from the Cumberland Valley railroad, Shippensburg station. Pay men $2 25 per day.

FULTON COUNTY.

R. Austin & Son.

Post office address, Saluvia, Pa.

Number of persons employed, 8; amount of capital employed in business, $30,000; amount paid annually for wages of employés, $2,600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,550; value of annual product, $3,600. Wages per day paid employés: Beam hands, $1 25; yard, 90 cents; rollers and spongers, $1 25; bark grinders, 90 cents; common laborers, 90 cents; curriers, shavers, table-hands, scourers, blackers, finishers, engineers, $1 25. Hours worked per day, 11.

Remarks.—The decline in prices of the materials used for making leather, in connection with the conservative spirit now generally ruling, renders the outlook more hopeful for the tanning interest, than it has been for some years past.

GREENE COUNTY.

M. M. Herrington.

Post office address, Whitely, Pa.

Number of persons employed, 2; amount of capital employed in business, $1,000; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $600; value of annual product, $1,500.

Remarks.—The tanning business has been extremely dull for the past few years, caused by over production of all kinds of leather, and the continued high prices for raw materials. Tanners receive $1 00 per day.

HUNTINGDON COUNTY.

Leas, McVitty & Sons.

Post office address, Saltillo, Pa.

Number of persons employed, 14; amount of capital employed in business, $61,000; amount annually paid for wages of employés, $4,960; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $57,640; value of annual product, $89,560. Wages per day paid employés: Superintendent, $2 33; foremen, 1 35; beam-hands, $1 25; yard, $1 03; rollers, 3 cents per hide; bark grinders, $1 00; common laborers, 94 cents. Hours worked per day, 10¼; days in operation during year, 310.

REMARKS.—Trade, this year, for the most part, has been very dull and unsatisfactory. Leather, for years, has not been manufactured by tanners at any margin of profits. The cause, we believe, to be an over production. We make heavy oak sole leather only.

Peter Kean.

Post office address, Alexandria, Pa.

Number of persons employed, 3; amount of capital employed in business, $3,000; amount paid annually for wages of employés, about $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,750; value of annual product, $3,600.

REMARKS.—This tannery is engaged in the manufacture of rough leather. Business being very dull at present, we are not tanning as many hides as formerly, our full capacity being eight hundred and fifty hides. Hides still keep at a pretty high figure, too high to warrant the buying by tanners, especially those who tan with cold liquors as we do. We think the depression in the leather business is due to the general stagnation of trade and to an overplus of stock in the hands of shoe manufacturers, but we think that if the European trade could be increased, the result would be a revival of the leather business of this country.

Estate of Jeremiah Bauman, Deceased.—W. H. Rex, Executor.

Post office address, Mapleton Depot, Pa.

Number of persons employed, 12; amount of capital employed in business, $60,000; amount paid annually for wages of employés, $7,885; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $55,900; value of annual product, $67,200. Wages per day paid employés: Tanners, $2 56; beam hands, $1 35; yard, $1 25; bark grinders, $1 12; common laborers, $1 00; engineers, $2 50. Hours worked per day, 10. Days in operation during year, 309.

REMARKS.—The capacity of this tannery is 12,000 sides per year. The buildings, engine, furnace, etc., are all in reasonable good condition. Owing to the close proximity of the bark districts, a first class quality of leather may be manufactured at a comparatively small cost. The supply of water is furnished by a never failing mountain stream, and is always abundant. I have given the number of employés and expenditures as when working full stock. Such has not been the case, however, since June of this year, (1878.) Since that time we have been slowly tanning out, and consequently the expenses of each succeeding month diminishes. The stock will be exhausted sometime in December, 1878.

Austin Green.

Post office address, Cassville, Pa.

Number of persons employed, 2; amount of capital employed in business, $970 95; amount paid annually for wages of employés, $150; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $820 95; value of annual product, $1,313 82.

JUNIANA COUNTY.

Jacob Smith.

Post office address, McAlisterville, Pa.

Number of persons employed, 4; amount of capital employed in business, $9,000; amount paid annually for wages of employés, $950; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $5,250; value of annual product, $7,000.

LACKAWANNA COUNTY.

A. C. McKinstry.

Post office address, Schultzville, Pa.

Number of persons employed, 50; amount of capital employed in business, $150,000; amount paid annually for wages of employés, $17,500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $130,000; value of annual product, $200,000. Wages per day paid employés: Tanners, $4 00; beam hands, $1 00; yard,

$1 00; rollers and spongers, $1 00 and $1 15; bark grinders, $1 00; common laborers, $1 00.

REMARKS.—We manufacture Union crop sole leather. Capacity—20,000 green hides, or 40,000 sides leather. Tannery run by steam power. Business, during the past year, has been much depressed. Hides have ruled high and leather very low. Too much leather has been produced in this country, which has necessitated the finding of foreign markets. All such shipments, during the past year, have resulted in loss to the tanner. American leather is well received abroad, and, eventually, it will prove a paying business. The past year, for American tanners, has been one in which no money has been made.

LANCASTER COUNTY.

Amos Hollinger.

Post office address, Lancaster, Pa.

Number of persons employed, 16; amount of capital employed in business, $40,000, outside of real estate; amount paid annually for wages of employés, $5,400; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $35,722; value of annual product, $46,050. Wages per day paid employés: Beam hands, $1 20; yard, 90 cents; bark grinders, 82 cents; curriers, $1 32; shavers, $1 23; table-hands, scourers, $1 00; engineers, $1 00; clerk, $1 65. Hours worked per day, average 10; days in operation during year, 300.

REMARKS.—The product of my tannery is oak harness leather, exclusively. No other leather is manufactured. The tanning capacity is about 3,500 hides per annum. The finishing capacity is about 5,000 hides per annum. The average product is, therefore, about 10,000 sides of oak harness leather yearly, when worked up to our full capacity.

Business, in general, has been more regular than the previous year. Prices not so fluctuating as formerly. The general tendency is to a more regular trade. Confidence is taking the place of former doubts and fears. The financial doctors create a little trouble at times, but there seems to be a feeling among business men in our trade, that all this financial tinkering will end in time. Our prices have declined, gradually, but the shrinkage was so gradual, that we could safely go on with our business, and give employment to men. We have done little over keeping straight, but consider we have done well. We feel that we have now, very nearly, or altogether, reached the turning point, and look for a regular trade at an early day.

John Dohner.

Post office address, Elizabethtown, Pa.

Number of persons employed, 7; amount of capital employed in business, $7,000; amount paid annually for wages of employés, $700; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,500; value of annual product, $6,500.

REMARKS.—The men at work all board with the proprietor, hence the wages are comparatively low. The wages average about $15 per month. The demand for all kinds of leather seems to be getting better.

LEBANON COUNTY.

William Biever.

Post office address, Annville, Pa.

Number of persons employed, 4; amount of capital employed in business, $13,000; amount paid annually for wages of employés, $1,090; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $9,050; value of annual product, $11,200.

J. & H. Loose.

Post office address, Myerstown, Pa.

Number of persons employed, 5; amount paid annually for wages of employés, $1,610; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $8,943 11; value of annual product, $12,610 27.

REMARKS.—We are paying our hands from $1 34 to 90 cents per day, all the year round, and work 10 hours in summer and 9 hours in winter, each day.

LEHIGH COUNTY.

James Singmaster.

Post office address, Macungie, Pa.

Number of persons employed, 3; amount of capital employed in business, $8,000; amount paid annually for wages of employés, $800; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $5,800; value of annual product, $10,000. Wages per day paid employés: Tanners, $1 00; curriers, $1 00; finishers, $1 00; bark grinders, 50 cents. Hours worked per day, 12; days in operation during year, all working days.

REMARKS.—I have gradually been curtailing production, on account of the scarcity of bark in this section.

LUZERNE COUNTY.

Davis & Tompkins.

Post office address, Pittston, Pa.

Number of persons employed, 5; amount of capital employed in business, $10,000; amount paid annually for wages of employés, $1,200; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $12,800; value of annual product, $15,000. Wages per day paid employés: Tanners, $2 00; beam hands, $1 40; yard, $1 10; rollers, $1 40. Hours worked per day, 10; days in operation during year, about two thirds time.

Samuel Rauch.

Post office address, Falls Run City, Pa.

Number of persons employed, 3; amount of capital employed in business, $7,000, outside of real estate; amount paid annually for wages of employés, $1,150; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $8,100; value of annual product, $12,000. Wages per day paid employés: Tanners, $1 25; beam hands, $1 40. Hours worked per day, 10; days in operation during year, 300.

REMARKS.—Business has been dull in general during the past four years. As to the cause of this state of affairs in our trade, my idea is that it is due, to a certain extent at least, to over production, which can only be relieved by a foreign market for our leather. My idea is, that the general shrinkage in value has depleted the pockets of every true and honest citizen of the United States, to a certain extent, and the consumption of leather is vastly curtailed in our country on that very account. The great business problem in our trade, for the last three years, has been to manage it so that we should keep even, and still continue on. The business man who has succeeded in keeping his business running for the last four years, and giving employment to his hands, without going backward, has done well for himself, his employés, and for his country.

Beaver Run Tanning Company.

Post office address, Ruggles, Pa.

Number of persons employed, 12; amount of capital employed in business, $25,000; amount paid annually for wages of employés, $2,500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $20,000; value of annual product, $30,000. Wages per day paid employés: Tanners, $2 00; beam hands, $1 12; yard, $1 00; rollers and spongers, $1 30; bark grinders, $1 00; common laborers, $1 00; teamster, $1 56; youth, 35 cents. Hours worked per day, 10; days in operation during year, one year.

Remarks.—Steam tannery, with a yearly capacity of 12,000 sides slaughter sole leather.

JOHN ARMSTRONG, *Sup't.*

LYCOMING COUNTY.

J. & E. Hardenburgh.

Post office address, English Centre, Pa.

Number of persons employed, 50; amount of capital employed in business, $75,000; amount paid annually for wages of employés, $16,400; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $89,000; value of annual product, $135,000. Wages per day paid employés: Tanners, $1 75; beam hands, $1 15; yard, $1 00; rollers and spongers, $1 15; bark grinders, $1 00; common laborers, $1 00; youth, 75 cents. Hours worked per day, 10; days in operation during year, 306.

McKEAN COUNTY.

John Ford.

Post office address, Port Allegany, Pa.

Number of persons employed, 3; amount of capital employed in business, $6,000; amount paid annually for wages of employés, $600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,500; value of annual product, $8,000.

Remarks.—Trade for the last year has been quite satisfactory, but the per centage of profit not near as large as for the several preceeding years. Price of bark remains the same, viz: $3 50, but the cost of hides have been altogether too high for the leather. I work what is known as country hides, shipping most of my production to Boston, Mass.

MIFFLIN COUNTY.

Spanogle & Pannebaker.

Post office address, Lewistown, Pa.

Number of persons employed, 16 to 18; amount of capital employed in business, $85,000; amount paid annually for wages of employés, about $5,800 to $6,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $70,000; value of annual product, $90,000. Wages per day paid employés, tanners, $2 25; beam hands, $1 50; yard, $1 10; rollers and spongers, $1 60; bark-grinders, 90 cents; common laborers, $1 00. Hours worked per day, 10 hours.

REMARKS.—Have not been working to full capacity this year, as there seems to be an overproduction of leather, and hides have been to high in price to afford a fair profit to the tanner.

MONTGOMERY COUNTY.

John C. Morgan.

Post office address, Fairview Village, Pa.

Number of persons employed, 3; amount of capital employed in business, $5,000; amount paid annually for wages of employés, $750; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,500; value of annual product, $6,500.

REMARKS.—Trade has been dull during first eight months of this year, after which it brightened somewhat, and business seemed to be assuming a more natural and steady condition, but with very small profits. In fact, in some grades, it is hard to get "a new dollar for an old one," as the saying is. Too much capital, too much ambition in buying hides and bark, too much tanning, are what seem to be the matter with the tanning business during this year, as hides have sold very readily, for good prices, while leather has sold slowly, at low prices; and so long as these facts exist, the tanner must necessarily work for little or no profit.

D. M. Casselberry.

Post office address, Lower Providence, Pa.

Number of persons employed, average about 2½ men; amount of capital employed in business, $5,000; amount paid annually for wages of employés, about $800; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c.., used in business, about $6,000; value of annual product, about $7,000.

MONTOUR COUNTY.

W. D. Weidenhamer.

Post office address, Limestoneville, Pa.

Number of persons employed, 3; amount of capital employed in business, $3,500; amount paid annually for wages of employés, $300; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,000; value of annual product, $4,000.

Remarks.—Tan by laying down in bark principally, using cold or lukewarm liquor. The strength of the bark is extracted in the leaches by filling the same with hot liquor, heated in a large tub heater, having a copper bottom. This liquor is never used on the leather until sufficiently cool. Use no acid or other ingredients to swell the leather or hasten the process of tanning, believing that such practices have a tendency to materially injure the quality and texture of the leather, especially the finer kinds, such as calf skins, kip, and upper.

The tanning business during the last year has been dull and unprofitable, the price of hides being too high in proportion to the prices of leather, either in rough or finished.

NORTHAMPTON COUNTY.

Ephraim Loux.

Post office address, Nazareth, Pa.

Number of persons employed, 2; amount of capital employed in business, $3,500; amount paid annually for wages of employés, $225 and board; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,437; value of annual product, $2,760 81.

PERRY COUNTY.

George Hench.

Post office address, Calisle, Pa. Tannery, Centre, Perry county, Pa.

Number of persons employed, 7, and transient hands; amount of capital employed in business, $56,000; amount paid annually for wages of employés, $4,050; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $21,000; value of annual product, $45,000. Wages per day paid employés: Foreman, $1 47; beam hands, $1 25; yard, $1 25; rollers and spongers, $1 30; bark grinders, $1; common laborers, 80 cents; engineers and firemen, $1 47. Hours worked per day, 12 hours in summer and 9 hours in winter. Days in operation during year, entire year.

REMARKS.—Work from sun to sun, which gives about an average of ten hours. Tan exclusively Spanish and Buenos Ayres hides. Business in this line, when well-tanned and well-selected hides (two essentials) are rigidly adhered to, is now paying better, and promises well in the near future, as the depression in the business, so severely felt, has caused all judicious tanners to use their brains in their business, and has had the effect of reducing expenses and paying less for hides, and especially for bark, and now we hope for an honest and living profit again.

Joseph Howell & Co.

Post office address, Millerstown, Pa.

Number of persons employed, 16; amount of capital employed in business, $100,000; amount paid annually for wages of employés, $7,500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $70,000. Wages per day paid employés: Tanners, $3 00; beam hands, $1 25; yard, $1 25; rollers and spongers, $1 25; bark grinders, $1 15; common laborers, 90 cents to $1 10. Hours worked per day, 10. Days in operation during year, 300.

John A. Bechtel's Son.

Post office address, Newport, Pa.

Number of persons employed, 12; amount of capital employed in business, $110,000; amount paid annually for wages of employés, $4,500; value of annual product, 372,000 pounds oak sole leather, $111,600. Wages per day paid employés; Beam hands, $1 25; yard, $1 10; bark grinders, 75 cents; common laborers, $1 00.

REMARKS.—Tannery was not carried on to more than two thirds of its capacity during the year, owing to unusual dullness in the leather trade.

C. A. Rippman.

Post office address, Newport, Pa.

Number of persons employed, 4 to 6; amount of capital employed in business, $20,000; amount paid annually for wages of employés, $1,500 to $2,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $18,000 to $20,000; value of annual product, $20,000 to $25,000. Wages per day paid employés: Beam hands, $1 25 to $1 40; yard, $1 00 to $1 12½; rollers and spongers, $1 25 to $1 40; bark grinders, $1 00; common laborers, $1 00. Hours worked per day, 10. Days in operation during year, every day except Sundays and national holidays.

PHILADELPHIA COUNTY.

William F. Forepaugh, Jr., & Brothers.

Post office address, Philadelphia.

Number of persons employed, 20; amount of capital employed in business, $80,000; amount paid annually for wages of employés, $12,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $50,000 to $60,000; value of annual product, $80,000.

William Hawkins & Co.

Post office address, 206, Willow street, Philadelphia.

Number of persons employed, 10; amount of capital employed in business, $20,000; amount paid annually for wages of employés, $9,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $9,000; value of annual product, $20,000.

B. Crawford.

Post office address, No. 1311 North Sixth street, Philadelphia.

Number of persons employed, 5; amount of capital employed in business, $25,000; amount paid annually for wages of employés, $2,188; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $12,000; value of annual product, $16,000. Wages per day paid employés; Tanners, $1 50; beam hands, $1 50; yard, $1 50: rollers and spongers, $1 67. Hours worked per day, 10; days in operation during year, 310.

REMARKS.—In operation the entire year, and are supposed to average ten hours work a day. Business being dull, and the price of hides keep high, I have only been working in about half the usual number, hardly enough to pay running expenses.

Keen & Coates.

Post office address, Philadelphia, Pa.

Number of persons employed, 24 ; amount of capital employed in business, $300,000 ; amount paid annually for wages of employés, $11,800 ; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $87,400 ; value of annual product, $140,000. Wages per day paid employés : Tanners, $1 66 ; beam hands, $1 83 ; yard, $1 50 ; rollers and spongers, $1 66 ; bark grinders, $1 50 ; common laborers, $1 50. Hours worked per day, 10 ; days in operation during year, 308.

SCHUYLKILL COUNTY.

D. Gensemer & Co.

Post office address, Pine Grove, Pa.

Number of persons employed, 7 ; amount of capital employed in business, $30,000 ; amount paid annually for wages of employés, $3,500 ; value of annual product, $36,000. Wages per day paid employés : Beam hands, $1 30 ; yard, $1 25 ; rollers and spongers, $1 75 ; bark grinders, $1 00 ; common laborers, $1 25 ; curriers, $1 50. Hours worked per day, 9 to 10 ; in operation every working day in the year.

REMARKS.—Ready sale for leather, yet tanning is not as remunerative as it was in 1871, which can be readily seen, by comparing the price of hides and leather of that year, with the present prices. Hides are too high, in proportion to the prices of leather, which is greatly due to the present system of purchasing hides. Too many trying to make a fortune by dealing in hides.

P. M. Barrow.

Post office address, Ringtown, Pa.

Number of persons employed, 3, a few days in the year, 4 ; amount of capital employed in business, $5,000 ; amount paid annually for wages of employés, $1,500 ; value of annual product, $10,000.

SNYDER COUNTY.

Ulrich & Brother.

Post office address, Selinsgrove, Pa.

Number of persons employed, 2; amount of capital employed in business, $4,325; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,325; value of annual product, $3,900.

SOMERSET COUNTY.

Jeremiah Wingert.

Post office address, Wellersburg, Pa.

Number of persons employed, 3; amount of capital employed in business, $4,000; amount paid annually for wages of employés, $600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,000; value of annual product, $7,000.

Jonathan Miller.

Post office address, Miller's Tannery, Pa.

Amount of capital employed in business, $4,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $2,150; value of annual product, $4,000.

Jehu McMillan.

Post office address, Listonburg, Pa.

Number of persons employed, 2; amount of capital employed in business, $1,215; amount paid annually for wages of employés, $465; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $750.

H. L. Dean & Bro.

Post office address, Addison, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,500; amount paid annually for wages of employés, $250; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $500; value of annual product, $1,000.

SUSQUEHANNA COUNTY.

A. Corbin & Co.

Post office address, New Milford, Pa.

Number of persons employed, 16; amount of capital employed in business, $45,000; amount paid annually for wages of employés, $5,600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $60,000; value of annual product, $75,000; wages per day paid employés: tanners, $2; beam hands, $1 12; yard, $1; rollers and spongers, $1 25; bark grinders, $1; common laborers, $1. Hours worked per day, 10 hours. Days in operation during year, 300.

REMARKS.—We manufacture hemlock sole leather. Business has been dull for the past five years. We believe this has been the experience of all tanners throughout the State. As to the cause of this state of affairs in our trade, our opinion is that it is due to overproduction and a general stagnation of business throughout the country. The great business problem in our trade for the last five years has been to manage it so that we could keep whole and continue on. We believe the most of the fraternity have lost money during the past five years.

George Fulmer.

Post office address, Lanesboro', Pa.

Number of persons employed, 25 hands, on an average; amount of capital employed in business, $50,000; amount paid annually for wages of employés, $9,600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $93,000; value of annual product, $98,000.

REMARKS.—The above number of hands, 25, includes as follows: Tanners, beam hands, rollers, bark grinders, and common laborers, including one apprentice. My profits are small this year, on account of the shrinkage in the price of leather since the 1st of January last.

TIOGA COUNTY.

F. Eberle & Brother.

Post office address, Westfield, Tioga county, Pa.

Number of persons employed, 3; amount of capital employed in business, $8,000; amount paid annually for wages of employés, $1,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c.,

used in business, $8,000; value of annual product, $11,000. Wages per day paid employés: Beam hands, $1; common laborers, $1; curriers, $1 25. Hours worked per day, 10. Days in operation during year, 308.

R. Hammond & Co.

Post office address, Osceola, Tioga county, Pa.

Number of persons employed, 20 to 30; amount of capital employed in business, $60,000; amount paid annually for wages of employés, $9,600; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $85,000; value of annual product, $100,000.

Wellsboro' Tannery.

Post office address, Stokesdale, Pa.

Number of persons employed, 51. Wages per day paid employés: Tanners, $3 50; beam hands, $1 25; yard, $1; rollers and spongers, $1 25; bark grinders, $1; firemen, $1 50; common laborers, $1. Hours worked per day, 10. Days in operation during year, every working day.

REMARKS.—This is known as the Wellsboro' Tannery. Located at Stokesdale, two miles below Wellsboro'; and tanned 45,000 South American hides, valued at $225,000. We made 1,620,000 pounds of leather, valued at $324,000. We used 11,000 cords bark, valued at $44,000. Paid for labor $20,000, and for freight $15,000.

BAILEY, LOWELL & CO.

WARREN COUNTY.

Horton, Crary & Co.

Post office address, Sheffield, Pa.

Number of persons employed, average about 150 men; amount paid annually for wages of employés, about $50,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $340,000; value of annual product, about $420,000. Wages per day paid employés: Tanners, $1 25; beam hands, $1 25; yard, $1 15; rollers and spongers, $1 15; bark grinders, $1 00; common laborers, 90 cents. Hours worked per day, 11; days in operation during year, 300.

REMARKS.—There is a large quantity of our product unsold, consequently it is an estimate; also as to amount of material used, as we keep quite a large stock over from one year to the next.

WAYNE COUNTY.

J. T. & W. Cromwell.

Post office address, Hawley, Pa.

Number of persons employed, 25; amount of capital employed in business, $50,000; amount paid annually for wages of employés, $8,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $50,000; value of annual product, $90,000. Wages per day paid employés: Tanners, 85 cents; beam hands, 85 cents; yard, 85 cents; rollers and spongers, 85 cents; bark grinders, 85 cents; common laborers, 85 cents. Hours worked per day, 10; days in operation during year, 312.

REMARKS.—Our tannery is located on the Wallen Paupack creek, in Pike county, Pennsylvania, close to the line between Pike and Wayne counties. We commenced the business, in 1858, of tanning hemlock sole leather, getting out 16,000 to 18,000 sides per year, which we continued doing until the breaking out of the war. We then enlarged our tannery to double its former capacity, and commenced the manufacture of Union crop sole leather, from domestic hides, and since then have continued producing that quality of leather. The business, since the close of the war, has been very much depressed, owing in part to the large overproduction, and in part to the great shrinkage in value of all commodities. The present condition of the trade is very discouraging, and the prospect for any improvement is very gloomy.

Ira Nichols.

Post office address, Pleasant Mount, Pa.

Number of persons employed, 15; amount of capital employed in business, about $35,000; amount paid annually for wages of employés, about $4,000; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, about $40,000; value of annual product, about $55,000. Wages per day paid employés: Tanners, $2 00; beam hands, $1 00; yard, 85 cents; rollers and spongers, $1 00; bark grinders, 85 cents; common laborers, 85 cents. Hours worked per day, sunrise to sunset; days in operation during year, about 300.

Wefferling, Bennig & Co.

Post office address, Honesdale, Pa.

Number of persons employed, 12; amount of capital employed in business, $30,000; amount paid annually for wages of employés, $2,200; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $36,000; value of annual product, $40,000.

Wages per day paid employés: Beam hands, $1 25; yard, 85 cents; rollers and spongers, $1 00; bark grinders, 90 cents; common laborers, 90 cents; apprentices or boys, 50 cents; foremen or overseers, $2 00. Days in operation during year, 313.

WESTMORELAND COUNTY.

James Douglass & Son.

Post office address, Latrobe, Pa.

Number of persons employed, 3; amount of capital employed in business, $5,000; amount paid annually for wages of employés, $800; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,800; value of annual product, $7,000.

REMARKS.—Production, harness, bridle, upper, kip, calf and sheep skins. Men employed do the work in common, therefore cannot classify them strictly. In operation during the entire year, some part of the work being done every work day. Yard we are operating is small—2 leaches, 2 limes, 2 bates, 1 pool, 18 lay-away vats, 4 handlers. Grind bark and do pumping with small engine. Make strictly oak tan leather, from domestic hides and skins. Have home trade for portion of our stock; surplus sold on consignment.

W. L. Chambers.

Post office address, Pleasant Unity, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,000; amount paid annually for wages of employés, $500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $1,200: value of annual product, $2,000.

REMARKS.—I manufacture sole, harness, and skirting, wax upper, kips, and calf-skins. Use chestnut oak bark in tanning, and finish the greater part of my stock.

B. E. Hebrank.

Post office address, Adamsburg, Pa.

Number of persons employed, 2; amount of capital employed in business, $2,000; amount annually paid for wages of employés, $600; value of annual product $3,600.

WYOMING COUNTY.

Smith Brothers.

Post office address, Factoryville, Pa.

Number of persons employed, 6; amount of capital employed in business, $5,000; amount paid annually for wages of employés, $100; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $4,200; value of annual product, $4,500.

YORK COUNTY.

H. Winebrenner & Son.

Post office address, Hanover, Pa.

Number of persons employed, 2; amount of capital employed in business, $5,600; amount paid annually for wages of employés, $680; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $8,600; value of annual product, $9,800.

Joseph Deardorf.

Post office address, Dillsburg, Pa.

Number of persons employed, 7; amount of capital employed in business, $10,000; amount paid annually for wages of employés, $1,150; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $5,952; value of annual product, $7,600.

Henry Kerlinger—Fountain Tannery.

Post office address, Stewartstown, Pa.

Number of persons employed, 2; amount of capital employed in business, $15,000; amount paid annually for wages of employés, $500; amount paid annually for materials, such as hides and skins, bark, oil, tallow, &c., used in business, $10,000; value of annual product—made no profit during year.

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